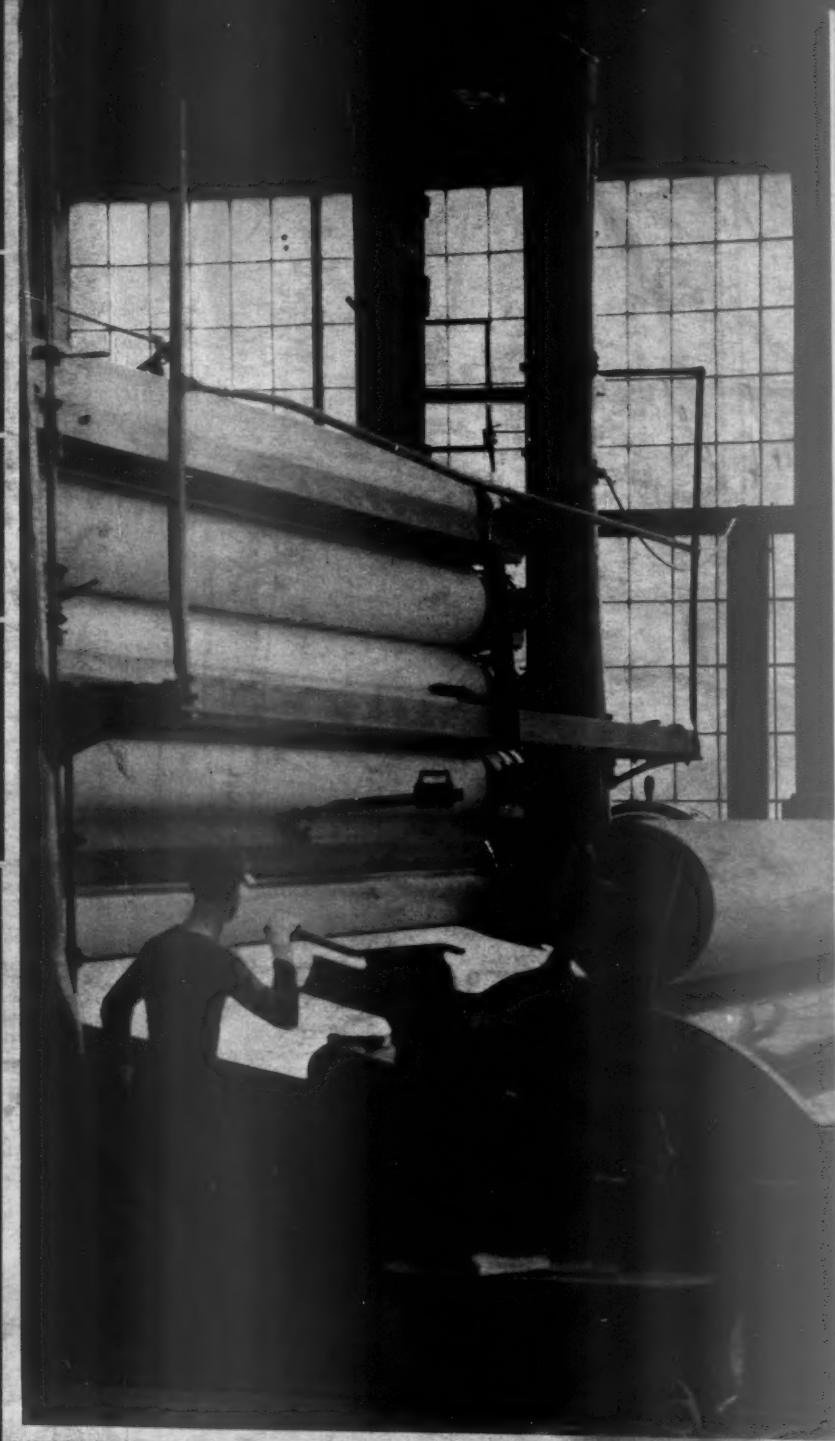
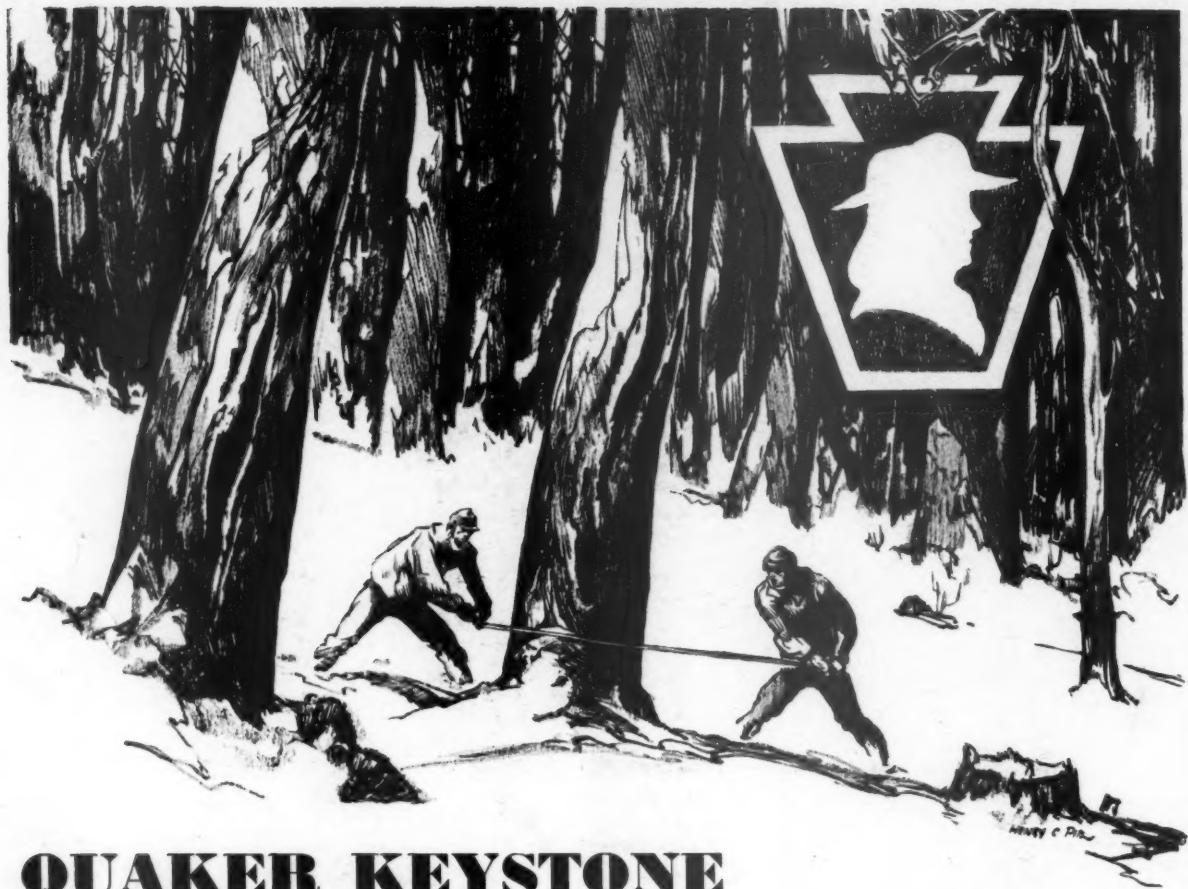


PACIFIC
PULP &
PAPER
INDUSTRY

JANUARY
1935





QUAKER KEYSTONE CHLORINE

The dependable quality of this product is the result of more than eighty-three years' experience in making chemicals for industry.

Furthermore, due to the convenient location of our plants, quick deliveries of Chlorine can be made to all parts of the country.

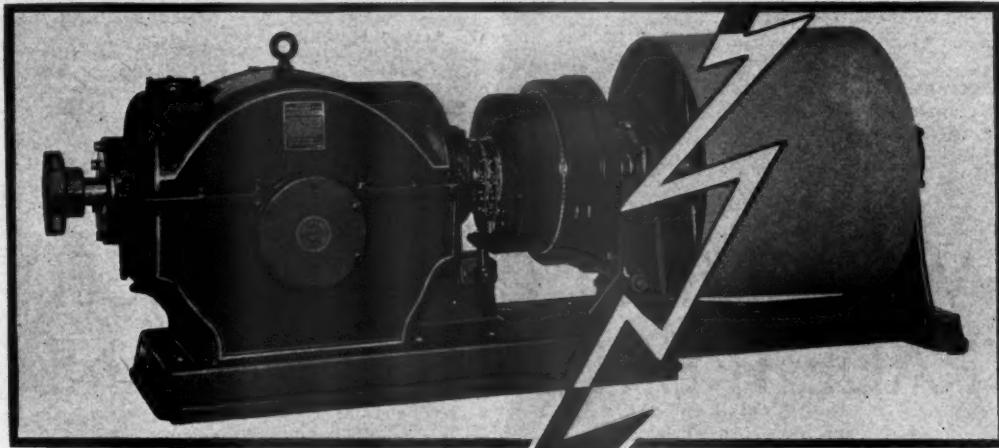
We will be glad to furnish highly specialized technical advice, upon request, without cost.

CHEMICALS
for the
PAPER INDUSTRY
CHLORINE CAUSTIC SODA
SODIUM ALUMINATE
PENCHLOR
(High-Test Calcium Hypochlorite)
PENCHLOR ACID-PROOF
CEMENT
ALUM
ANHYDROUS AMMONIA
BLEACHING POWDER
(Standard Strength)

PENNSYLVANIA SALT MFG. CO.
OF WASHINGTON.
PHILADELPHIA, PENNSYLVANIA TACOMA, WASHINGTON

BELLOIT

962 /
8853
3 ✓



BELLOIT HEAVY DUTY

HYPOID GEAR DRIVE

NEW BELLOIT MAGNETIC CLUTCH

SPECIAL DESIGN FOR PAPER MILL SERVICE

ONLY ONE SIMPLE ADJUSTMENT—pull out two spring loaded lock pins and turn large screw hub with a rod inserted into one of several holes in the hub. Visible air gap can be easily checked. Complete adjustment can be accomplished in less than one minute by anyone. Easier than mechanical clutch adjustment.

SPLIT DISCS CAN BE EASILY CHANGED by sliding back the outer housing without dismantling the entire clutch. Requires less than half hour.

SELF-CENTERING SPLIT COLLECTOR RINGS positively will not run out, insuring long life brushes. There are two brushes for each ring, each with separate pressure spring providing positive contact at all times.

MAXIMUM FRICTION AREA AND LOW UNIT PRESSURES avoid over-heating and insure long life and few adjustments.

Many Other Desirable Improvements

THE BELLOIT WAY

BELLOIT IRON WORKS

IS THE MODERN WAY

BELLOIT, WIS., U. S. A.



PACIFIC PULP & PAPER INDUSTRY

THE PACIFIC COAST JOURNAL FOR PRODUCERS, CONVERTERS,
AND DISTRIBUTORS OF PULP, PAPER, AND BOARD.

MILLER FREEMAN, President
LAWRENCE K. SMITH, Manager

SEATTLE
71 Columbia Street
Telephone MA-1626

HARLAN SCOTT, Editor

JOHN E. BROWN
LOS ANGELES
124 West 4th St.
Telephone Mutual 5857

SAM M. HAWKINS
SAN FRANCISCO
369 Pine Street
Telephone GA-5887

HARRY L. POTTER, Managing Editor
KEMPER FREEMAN, Circulation Mgr.

PORLAND
1220 S.W. Morrison St.
Telephone AT-8890

Vol. 9

JANUARY, 1935

No. 1

WHAT IS IN THIS PROPOSED TRADE TREATY WITH FINLAND?

What Does the State Department Plan? — The Pulp and Paper Industry
Has a Right to Know — as 91% of our 1933 Imports From
Finland Were Pulp, Paper and Paper Products

When the representatives of the American pulp and paper industry present their written briefs to the Department of State in Washington February 4th, and make their oral presentation on February 11th, on the proposed reciprocal trade treaty with Finland, THEY WILL BE WORKING IN THE DARK, for the State Department, following its usual practice, in receiving testimony on trade treaties, has given no indication of what deal it proposes to make with Finland.

Paper Industry Fearful
Both the pulp industry and the paper industry, particularly the latter, has good reason to be afraid of this proposed Finnish treaty because in 1933 pulp, paper and paper products constituted 91.36 per cent of all United States imports from Finland; and too, because the free-trade attitude of Secretary of State Cordell Hull is well known.

The 1933 American imports of pulp, paper and paper products from Finland amounted to \$8,145,387. Of this total woodpulp, which is duty free, amounted to \$6,486,828. Newsprint, which is also free, amounted to \$1,432,964. Dutiable papers and board totaled \$225,595.

American Price Structure Endangered

The Import Committee of the American Paper Industry in a bulletin issued January 16th, 1935, states, "Any proposals for the reduction of duties on any of the papers produced in these countries (Finland and the Netherlands) will be opposed, as both countries ARE SELLING THEIR PRODUCTS IN THIS COUNTRY EVEN NOW AT PRICES BELOW AMERICAN COSTS OF PRODUCTION."

It is generally recognized that Finland's costs of production are exceptionally low due to very low wages, the employment of many women, modernly equipped mills and government assistance in financing. These factors enable Finland to sell newsprint and other paper products at prices below American prices despite present duties.

Surely, a trade treaty with Finland must, no matter whether it increases, decreases, or permits imports of Finnish pulp paper to remain static, contain strict provisions to prevent price cutting in the American market, especially at this time when the North American newsprint producers are endeavoring to

stabilize newsprint prices at higher levels on account of increasing costs.

A removal of duties at the present time would permit Finland, because of its low production costs, to expand its exports to this country of the class of products now grouped in the total of \$225,595 of dutiable products.

We Have Nothing to Give Finland

In negotiating a reciprocal trade-treaty the United States has virtually nothing it can make a concession on to Finland's advantage, as far as the pulp and paper industry is concerned. Pulp and newsprint which totaled \$7,919,792 of the total imports of pulp, paper and paper products of \$8,145,387 are already free of duty. The remainder of dutiable products is negligible.

However, as the State Department is dominated with the free trade idea it is entirely possible that it might endanger the American pulp and paper industry by offering Finland a market for larger quantities of pulp and newsprint. To do this the Federal administration would have to adopt the quota system, which it has so far avoided.

The point is that we don't know what the State Department has in

mind but we fear it may attempt to give away more of the American market for pulp and paper in return for a Finnish agreement to buy larger quantities of manufactured products in the United States. Should this conjecture turn out to be true the Pacific Coast industry would be particularly hard hit, both on newsprint and pulp.

The Common Sense View

On the basis of our trade in 1933 with Finland, which was heavily in that country's favor to the extent of \$5,453,340, the reciprocal part of a trade treaty should be entirely on Finland's side. In 1933 the United States bought more than two and a half times as much from Finland as it sold to that country. The difference is too great. **WITHOUT INCREASING OUR PURCHASES FROM FINLAND THAT COUNTRY SHOULD BUY MORE FROM THE UNITED STATES.**

Situation Calls for a Yankee Trader

The State Department in negotiating a reciprocal trade treaty with Finland, should, if it has the real business interests of the United States at heart, adopt the tactics of a shrewd Yankee trader to put the situation bluntly up to Finland along these lines. Finland should be told that as the trade balance stands so greatly in her favor, there is no advantage to the United States in buying pulp and paper from her. Finland ought to be informed that the American pulp and newsprint industry stands ready to expand its production of pulp and newsprint to displace foreign imports and can, from the Pacific Coast forests perpetually sustain an annual production greater than present imports.

The point should be driven hard, that it is distinctly to the disadvantage of the United States to buy Finnish pulp when that pulp could be produced here and provide employment for many men, **UNLESS** Finland buys enough from us in return to offset the loss to American labor.

State Department Has the Weapon

The State Department could make the above blunt proposal to Finland with the knowledge that it has the weapon with which to back up its stand. This potentially powerful weapon is Section 3(e) of the National Recovery Act, which provides for the reduction of imports of any products when it is shown the imports of that product are curtailing American production and

throwing American workmen out of work. The State Department could rightfully tell Finland that her pulp and newsprint coming into America is curtailing American production, and that it is up to her to buy more from us to the extent of bringing the trade between the two countries closer to an actual balance.

Section 3(e) Has Not been Used

But the Federal administration apparently does not intend to use Section 3(e) either to help develop the American pulp and paper industry or to increase exports of American manufactured products. Recently President Roosevelt declined to enforce this portion of the National Recovery Act against Canadian newsprint in an effort to raise the price to a profitable level for American newsprint mills. There are no grounds upon which to base a hope that the State Department will employ Section 3(e) in its negotiations with Finland.

State Department's Non-Cooperative Attitude

As was pointed out in the November issue of PACIFIC PULP & PAPER INDUSTRY in an article on the proposed Swedish reciprocal trade treaty, the Department of State, because of its great hurry to show results in making these treaties, does not trouble itself to inform Americans interested in the making of these treaties, giving broad public notice only of the Department's intention to negotiate a trade treaty with a specific country.

The Department of State announces dates for accepting written and oral presentations of data from interested parties. The Committee on Reciprocity Information takes the written arguments and listens to the oral presentations. Then all is silence. No indication of what the State Department plans to do, whether it aims to help the interested American industries, or to injure them by making a deal to swap agricultural products for foreign manufactured goods. American industries are in the dark. They do not know whether the Department of State is a friend or a foe. The only interpretation that American industries can make is that the State Department's silence means that some industries may be severely damaged by the treaty when consummated, and hence, the Department's feeling that it alone knows what is best for the United States, as all industries are "selfish interests," so it says nothing and does not cooperate with the industries likely to be affected.

Why Not Cooperation on The Finnish Treaty?

How much more conducive to the success of these reciprocal trade treaty negotiations an open, friendly, cooperative attitude on the part of the State Department would be.

Since the American pulp and paper industry is the chief industry concerned with the trade treaty with Finland, as 91.36 per cent of our imports from Finland are pulp, paper and paper products, why doesn't the State Department take the industry into its confidence, lay the cards on the table and explain exactly what it intends to accomplish through negotiating the Finnish treaty? Isn't the pulp and paper industry of this country, through its trade organizations, better able to assist the State Department in determining the basis for a reciprocal treaty with Finland, a treaty which would not damage American mills and their workmen, than any group of men in the State Department or any other branch of the Federal government? Then why doesn't the State Department work closely with the American pulp and paper industry instead of treating it as a rank outsider?

There is no indication that the State Department has or intends to consult other Federal departments before arranging treaties with various foreign nations. But, why doesn't the State Department consult with the Chief Forester on the ambitious forestry development program initiated by President Roosevelt? In the absence of cooperation between the State Department and the Forest Service, under the Department of Agriculture, trade treaties might be easily consummated which would through increasing the importation of pulp and paper entirely nullify the Forest Service's program for sustained yield forestry by reducing timber values. In any forestry program commercial utilization of the grown trees must be taken into consideration, and likewise the pulp and paper industry must also be considered for it is a steadily growing market for wood. **IF WE INCREASE IMPORTS OF PULP AND PAPER WE REDUCE THE MARKET VALUE OF OUR GROWING TIMBER BY CURTAILING THE MARKET FOR IT.**

What the Table Shows

The following table of trade between the United States and Finland in 1929 and 1933 shows that we have no concessions to make

PACIFIC PULP & PAPER INDUSTRY

Finland and confirms the belief that we need to tell Finland frankly that she must buy more from this country. The table shows the relative stability of American imports of Finnish pulp and paper throughout the depression years as compared

with the drop in imports of other products. It also shows that Finland in 1933 bought a little more than a third as much from this country as she bought in 1929, while the total American imports of Finnish products dropped but 20 per cent.

THE U. S.-FINNISH TRADE SITUATION* 1933

TOTAL U. S. IMPORTS FROM FINLAND	\$ 8,915,533
U. S. IMPORTS FROM FINNLAND of PULP, PAPER and PAPER PRODUCTS	8,145,387
U. S. IMPORTS OF ALL OTHER PRODUCTS FROM FINLAND	\$ 770,146
PULP, PAPER and PAPER PRODUCTS REPRESENTED 91.36% OF ALL U. S. IMPORTS FROM FINNLAND IN 1933	
TOTAL U. S. IMPORTS FROM FINLAND	\$ 8,915,533
TOTAL U. S. EXPORTS TO FINNLAND	3,462,187
BALANCE IN FAVOR OF FINNLAND	\$ 5,453,340

IN 1933 THE U. S. BOUGHT FROM FINNLAND MORE THAN 2½ TIMES AS MUCH AS WAS SOLD TO FINNLAND

1929	
TOTAL U. S. IMPORTS FROM FINNLAND	\$11,225,433
U. S. IMPORTS FROM FINNLAND OF PULP, PAPER and PAPER PRODUCTS	9,398,439
U. S. IMPORTS OF ALL OTHER PRODUCTS FROM FINNLAND	
U. S. IMPORTS OF ALL OTHER PRODUCTS FROM FINNLAND	\$ 1,826,994
PULP, PAPER AND PAPER PRODUCTS REPRESENTED 83.8% OF ALL U. S. IMPORTS FROM FINNLAND IN 1929	
TOTAL U. S. EXPORTS TO FINNLAND	\$14,893,726
TOTAL U. S. IMPORTS FROM FINNLAND	11,225,433
BALANCE IN FAVOR OF U. S.	\$ 3,668,293

IN 1929 FINNLAND BOUGHT FROM THE U. S. 33.6% MORE THAN THE U. S. BOUGHT FROM FINNLAND COMPARISONS, 1929 and 1933

U. S. EXPORTS TO FINNLAND IN 1929	\$14,893,726
U. S. EXPORTS TO FINNLAND IN 1933	3,462,187
DROP 76% or	\$11,431,539
U. S. IMPORTS FROM FINNLAND IN 1929	\$11,225,433
U. S. IMPORTS FROM FINNLAND IN 1933	8,915,533
DROP 20% or	\$ 2,309,900
DROP IN U. S. EXPORTS TO FINNLAND WAS NEARLY 4 TIMES AS MUCH THE DECLINE IN U. S. IMPORTS FROM FINNLAND	
1929—U. S. IMPORTS FROM FINNLAND OF PULP, PAPER and PAPER PRODUCTS	\$ 9,398,439
1933—U. S. IMPORTS FROM FINNLAND OF PULP, PAPER and PAPER PRODUCTS	8,145,387
DROP IN U. S. IMPORTS OF PULP, PAPER and PAPER PRODUCTS FROM FINNLAND SINCE 1929	\$ 1,253,052
DROP OF 13.3% IN U. S. IMPORTS FROM FINNLAND OF PULP, PAPER and PAPER PRODUCTS COMPARED TO A DROP IN ALL IMPORTS FROM FINNLAND OF 20.6%	

*Compiled from data furnished by the Bureau of Foreign and Domestic Commerce.

INCREASE IN CHEMICAL PULP PRODUCTION IN FINLAND

In the year 1919 the total chemical pulp production in Finland amounted to less than 100,000 tons. For 1935 it is estimated that the total chemical pulp production will be 970,000 tons of which 735,000 tons will be sulphite and 235,000 tons sulphate pulp.

TWO PULP BILLS INTRODUCED IN CONGRESS

Shortly after the present Congress opened in Washington two new bills were introduced affecting the pulp and paper industry.

Anthony J. Dimond, delegate from Alaska, introduced a bill in the House of Representatives providing that imported wood pulp and pulpwood and manufactured products thereof be taxed to raise revenue. The Dimond bill states "that section 601(c) (4) of the Revenue Act of 1932 is amended by inserting before the period at the end of the first sentence thereof, the following: Pulpwood, \$2 per cord of one hundred and twenty-eight cubic feet; unbleached chemical wood pulp \$7.50 and bleached chemical wood pulp, \$10 per short ton; mechanically ground wood pulp, \$4.50 per short ton; Provided, that any products manufactured from ground wood pulp or chemical wood pulp shall pay a tax based on the tonnage of ground wood pulp or chemical pulp used in their manufacture, at the rate above specified with respect to certain ground wood pulp and chemical wood pulp; except as to products composed of ground wood pulp or chemical wood pulp against which a tax or duty is otherwise imposed."

Representative Bland of Virginia introduced a measure "to prohibit the importation of pulpwood, wood pulp or any wood susceptible of use in manufacturing paper, and that the provisions of this act shall be deemed to be a part of the Tariff Act of 1930."

SWEDISH MILLS NOT AFRAID OF THE FUTURE

According to a report from Acting Commercial Attaché Osborn S. Watson in Stockholm, several north Swedish pulp mills plan to increase their aggregate production of pulp about 77,000 metric tons. The additional tonnage is reported to consist of 59,000 tons of sulphite pulp; 8,000 tons of sulhite pulp, and 10,000 tons of groundwood pulp.

UNIONS VOTE OPPOSITION TO PROPOSED POLLUTION BILL

**Enactment by the Washington Legislature Would Throw
Thousands Out of Jobs by Closing All Pulp
and Paper Mills in the State**

At a two days' meeting in Shelton, Washington, January 15th and 16th, of more than 70 delegates from every Pacific Northwest local of the International Brotherhood of Pulp, Sulphite and Paper Mill Workers and of the International Brotherhood of Paper Makers, known collectively as the Pacific Northwest Pulp & Paper Mill Employees Association, a resolution was unanimously adopted strongly opposing the measure expected to be offered the Washington State legislature at its present session, which would prevent by law the dumping into the waters of Washington of any waste material from industrial plants.

At the time of going to press the so-called pollution bill has not yet been introduced into the legislature, so its sponsors cannot be publicly identified. The bill is printed with this article.

The proposed bill is so drastic in its provisions that not a pulp mill, could operate without breaking the law.

Note in the last paragraph of the bill that, "In prosecution under this article, for the pollution of waters by substances known to be injurious to fish or to fish food, it shall not be necessary to prove that such substances have actually caused the death of any particular fish."

This clause would deprive industrial plants discharging waste of their right to offer scientific proof that the wastes discharged were not injurious to marine life.

Nor does the measure make any distinction between the effects of various concentrations of waste materials. It is well established that the toxic effects of various waste materials discharged into rivers or salt water depends first upon the type of waste and second, upon the resulting concentration of the waste after dilution and oxidation in the water. Time and again it has been shown that the diluting and oxidizing effects of the water into which the waste is discharged so reduces the strength of the waste that there is no effect upon marine life.

This bill to be offered the legislature makes no distinction, simply prohibiting all industrial waste from being discharged into waters of the state.

Present Law Is Adequate

The present state law covering the dumping of waste materials and liquors into the waters of the state is adequate and is being administered sensibly by the State Department of Fisheries. The Department has full power to stop the discharge of

waste where it finds it to be injurious to fish life.

Effect of Proposed Bill on the Pulp and Paper Industry

The growing pulp and paper industry in the State of Washington would be killed were this bill made into law. With it would go the employment of thousands of men and women directly and indirectly supported by the pulp and paper mills. Gone would be the outlet for our

**RESOLUTION ADOPTED UNANIMOUSLY
BY THE PACIFIC NORTHWEST PULP &
PAPER MILL EMPLOYEES' ASSOCIATION,
Meeting at Shelton, Washington, Jan. 16th, 1935.**

January 16, 1935

To the Delegates of the Northwest Paper and Pulp Mill Employees' Association in conference at Shelton, Washington, January 15th and 16th:

GREETINGS: Whereas a bill is to be proposed at the present state legislature at Olympia which will prohibit any pulp or paper mill from dumping any water in any bays or rivers.

Whereas, the Pulp and Paper industry in the state of Washington has been practically the only industry to maintain one hundred per cent operation and maintain their wage scale, and

Whereas, some ten thousand employees are at present employed in said industry. Therefore, Be It Resolved, that we, the delegates of this convention here assembled at Shelton, Washington, Jan. 15th and 16th go on record as opposed to any legislation that will hamper the present industry or its expansion in the State of Washington.

A copy of this resolution to be sent to all central labor councils and to the representatives of the legislature and also that the several locals be requested to circulate petitions opposing legislation and also that a copy of this resolution be given the editor of **PACIFIC PULP AND PAPER INDUSTRY** for publication in that journal.

Fraternally submitted,

Signed—JOHN SHERMAN,
FRANK C. BARNS, Jr.
E. DENBY BROWNE.

PACIFIC PULP & PAPER INDUSTRY

hemlock and spruce and their market value would decline to almost nothing. Gone would be the millions paid the State of Washington in taxes. And what would be gained? Nothing that would reimburse the state and its people for the wealth destroyed. Let's take a look at the actual figures showing the value of the pulp and paper industry to the State of Washington.

The following table shows the number of men and women employed DIRECTLY by the pulp and paper mills and converting plants and their wages in the State of Washington in 1933. The statistics

Number of Wage Earners Directly Employed	Wages of Those Directly Employed	*Value of Pulp & Paper Products Produced
4,710	\$4,917,000	\$39,736,522

*The aggregate value of products includes duplication due to the use of the products of the pulp industry as material for the paper industry. According to the Bureau of Census this duplication for all industries for the United States as a whole amounts to about one-third of the gross value of the products.

are from the 1933 Census of Manufacturers-Bureau of Census-Department of Commerce.

In addition there are many people whose employment by this industry is indirect. Their numbers and their earnings cannot be defined.

nitely ascertained. We know that the industry purchases exceptionally large quantities of raw materials and supplies, thereby providing employment for a great many people of this state.

Value of Pulpwood to Washington

In 1933, according to the Census of Manufacturers issued by the Department of Commerce, the State of Washington consumed 1,076,752 cords of its own pulpwood, MORE THAN ANY OTHER STATE. This pulpwood cost \$5,218,145, all of which went to citizens of the State of Washington.

Disposal of Waste Essential

Pulp and paper mills do not want to dispose of waste by dumping into rivers and harbors, for this waste contains valuable materials which the mills paid money for, but science so far has not been able to develop commercial methods of recovery. Until the time comes that waste liquors can be used in making commercial products it is essential that they be disposed of as waste.

However, the time may not be far off when waste liquors will yield valuable products. Much research is being concentrated on this problem and signs of success are appearing, but the industry has not yet found any method that is uniformly successful in all plants. Millions of dollars have been expended by the industry in many countries in an effort to recover waste liquors. Here on the Pacific Coast the Rainier Pulp & Paper Company has spent well over a quarter of a million dollars in an effort to utilize their waste liquor. Their process is now being worked out on a commercial basis.

The point is that pulp and paper mills cannot overnight cease disposing of their waste liquors as waste. Much research remains to be performed, and in the meantime, Washington as the leading timber state does not want to kill its most promising industry.

Why Was Sewage Omitted From the Bill

The writers of the proposed pollution bill challenge their own sincerity by failing to include sewage as waste to be prohibited from being dumped into waters of the state. In this state there is probably greater possibilities of pollution through sewage than from industrial waste. Yet industry alone was singled out to be crushed by being prevented from disposing of waste by dis-

THE PROPOSED BILL

AN ACT amending Section 5941, Remington's Revised Statutes of Washington Annotated (Laws of 1925, Ex. Sess. P. 530, Sec. 82) prohibiting the casting of waste or deleterious substances, chemicals or poisons into the waters of this State, and providing penalties therefor.

BE IT ENACTED by the Legislature of the State of Washington that Sec. 5941 of Remington's Revised Statutes of Washington Annotated, be amended to read as follows:

It shall be unlawful to cast or pass, or suffer or permit to be cast or passed into any waters of this State, either fresh or salt, any waste liquor, commonly known as sulphite waste liquor, or sulphate waste liquor, from any digester or any pulp mill or paper mill, or any other plant, employing what is commonly known as the sulphite process, or sulphate process or soda process in the manufacture of pulp.

It shall also be unlawful to pass or cast, or suffer or permit to be cast or passed into any waters of this State, either fresh or salt, public or private, any dyestuffs, coal-tar, refuse from a gas-house, cheese factory, condensory or canning factory, sawdust, shavings, tanbark, lime or other deleterious or poisonous substances into the waters, either private or public, in quantities injurious to fish life, or shellfish life inhabiting the same, or injurious to the propagation of fish therein.

Any person violating the provisions of this act shall be guilty of a gross misdemeanor. It is hereby made the duty of the Attorney General and he is hereby given authority when requested by the Fish Commissioner of the State of Washington, to enforce this act by filing any information direct in the Superior Court of any county of the State in all cases where the Prosecuting Attorney may fail to institute a prosecution within ten days after information has been given to him.

IN PROSECUTION UNDER THIS ARTICLE, FOR THE POLLUTION OF WATERS BY SUBSTANCES KNOWN TO BE INJURIOUS TO FISH OR TO FISH FOOD, IT SHALL NOT BE NECESSARY TO PROVE THAT SUCH SUBSTANCES HAVE ACTUALLY CAUSED THE DEATH OF ANY PARTICULAR FISH.

charge into the waters of the state.

Hence the bill would be class legislation if passed for it would grant power to put any industry out of business, although it would not affect cities who dump their sewage into rivers and harbors.

If this bill is introduced into the present legislature as is planned, the members should act wisely by killing it in committee.

Unions Active

Members of each local union will contact the members of the legislature from their respective districts and inform them of the danger of this bill to the pulp and paper in-

dustry and of the work the industry provides for thousands of Washington workers.

Oregon Also Threatened

It is rumored that a similar bill will be introduced in the Oregon legislature at its present session. The meeting of the Pacific Northwest Pulp & Paper Mill Employees Association, also adopted unanimously a resolution opposing such legislation in Oregon, and the Oregon union men will acquaint the members of their legislature with the serious danger of the measure to the pulp and paper industry in Oregon.

OREGON FLAX STRAW SOLD FOR CIGARETTE PAPER

Oregon flax growers will receive \$50,000 for flax straw grown this year as a result of a deal negotiated by William Einzig, secretary of the Oregon Board of Control, with the Champagne Paper Company of New York City in cooperation with Governor Julius L. Meier. Governor Meier estimates that the contract for 2,000 tons of flax straw will cause the planting of an additional 1,000 acres to flax.

The flax straw is to be packed into thirty-inch lengths and baled for shipment to France where the Champagne Paper Company has a four-machine mill near Nantes for making cigarette paper. After conver-

sion into paper the Oregon straw, so it is said, will be shipped back to the United States for use in making American cigarettes.

Oregon flax growers are to receive \$23 per ton. If the shipments are satisfactory the governor pointed out that additional tonnage would be contracted for in 1936.

The sale of Oregon flax straw for making cigarette paper has already brought about discussion of the feasibility of eventually establishing a cigarette paper mill in the Willamette Valley to save freight charges by processing the straw right where it is grown.

NEWS OF THE TASMANIAN PROJECT

In the Melbourne (Australia) Herald of November 22, 1934, appeared the following news story commenting upon the recent experiments carried on at Pacific Mills, Limited, Ocean Falls, B. C., on the making of newsprint from Tasmanian eucalyptus wood.

"The annual meeting of shareholders of the Herald and Weekly Times Limited was held at the office of the company today, the chairman of directors, Mr. Theodore Fink, presiding.

"Dealing with the company's experiments in the making of paper from Australian hardwoods, Mr. Fink stated that the annual report had contained a reference to the visit of Mr. Thorold Fink and Mr. L. R. Benjamin to Canada. Since that report had been circulated, a full report had been made upon the results of the large scale papermaking tests carried out at Ocean Falls, British Columbia.

"This report was still under consideration by the directors, and they were not yet able to define a policy. The shareholders could rest assured, however, that the results were sufficiently encouraging to proceed with the investigation work, vigorously, but with extreme caution.

"In the meantime one of the foremost logging engineers of the North American continent, Mr. Paul Freydig, was on his way to Tasmania to check up estimates as to wood costs and to advise generally upon methods of operation. These questions required further careful examination by a leading authority. A distinguished consultant engineer was engaged upon some of the preliminary work of capital cost estimation of the construction of chemical pulp mills.

"The investigations into the economic aspect would be continued, and it was hoped that a great industry would be established. No rash or ill-advised action would be taken, however."

CHEMIPULP AT POWELL RIVER OPERATING SUCCESSFULLY

All the expectations of Powell River Company respecting its new chemipulp system installed at its big British Columbia mill have been fulfilled, according to A. E. McMaster, general manager.

"In a sense the installation was an experiment, although we were pretty confident that performance would justify the rather heavy investment," said Mr. McMaster. "Our whole objective was to improve the quality of our newsprint, and that has been attained very satisfactorily. Not only is the product better, but the system has enabled us to effect economies as well."

Powell River Company, seldom troubled by lack of markets, is operating at full capacity with an abundance of orders in sight. The increased price has been an important advantage, but not sufficient to justify further installations for some time, according to Mr. McMaster.

B. C. PULP RUNNING STEADY

"The pulp market has been down for six months and no developments have arisen lately to indicate substantial improvements," reported President Lawrence Killam, of B. C. Pulp & Paper Company. However, the company still operates its mills at Port Alice and Woodfibre at full time, and a fair volume of business is being done, the chief trouble being low prices.

Asked whether sale of bleached pulp in the East had been affected by the tendency of mills in consumer territory establishing their own bleaching plants, Mr. Killam said he had not encountered this recently. In Japan something along this line had been done some years ago, but without sufficient success to warrant its continuance.

WASHINGTON PULP CONTRIBUTES TO CHRISTMAS FUND

The Washington Pulp & Paper Corporation of Port Angeles, Washington, contributed \$400 to the Christmas Fund gathered by the Port Angeles Evening News. The News remarked that no checks were received from the Newfoundland mills where men got 18c and 21c an hour.

COAST MEN HELP PREPARE FEBRUARY TAPPI MEETING

At the annual meeting of the Technical Association of the Pulp and Paper Industry at the Waldorf-Astoria Hotel in New York, February 18th to 21st, an unusually complete program of technical papers will be presented covering in detail sulphite pulping, stuff preparations (beating, jordaning and refining), sizing, groundwood production and paper manufacturing.

Twelve Pacific Coast men are participating in this meeting either through membership on committees or by presenting papers.

Four men from the Pacific Coast industry will offer papers. C. W. Morden, president of the Morden Machines Company of Portland together with George H. McGregor of the Pulp Division of the Weyerhaeuser Timber Company of Longview, will present a paper on "The Stock Maker" Precision Laboratory Beater.

E. A. Weber, sulphite superintendent of the Oregon Pulp & Paper Company at Salem, Oregon, will discuss "Forced Circulation in Sulphite Digesters".

G. V. Palmrose of the Research Department of the Pulp Division, Weyerhaeuser Timber Company, Longview, will present a paper on "A Mill Test for the Exact Deter-

mination of Combined Sulphur Dioxide".

Carl Fahlstrom of the Longview Fibre Company is a member of the Stuff Preparation Committee. Dr. W. Hirschkind, vice-president in charge of research and development for the Great Western Electrochemical Company of San Francisco, is a member of the TAPPI Committee on the Preparation of Non-Fibrous Materials, which is a part of the TAPPI Operations Division.

G. F. Alcorn and George H. McGregor both of the Pulp Division of the Weyerhaeuser Timber Company of Longview are members of the Materials of Construction Committee.

B. T. McBain, pulp and paper mill consultant of Portland, is a member of the Coarse Paper Manufacture Sub-Committee which will sponsor several papers.

W. Norman Kelly, superintendent of the Pulp Division of the Weyerhaeuser Timber Company, is chairman of the Western sub-committee of the TAPPI Acid Pulping Committee. Other Pacific Coast members of this committee are G. J. Armbruster, superintendent of the Soundview Pulp Company; E. A. Weber of the Oregon Pulp & Paper Company; A. G. Natick,

assistant manager of the Crown-Willamette Paper Company at Camas, and A. H. Lundberg, Pacific Coast representative of the G. D. Janssen Company and of the Chemipulp Processes.

FIBREBOARD INSTALLS CLOSED WATER SYSTEM

Changes are being made in the Vernon, Calif., plant of Fibreboard Products, Inc., in an effort to conserve the fresh water supply. The piping system is being revamped so that the gallons of water used per ton will be reduced.

The plant formerly used about 20,000 gallons of water per ton produced, and recently cut this down to 17,000 gallons per ton. It is hoped that the new system will lower consumption still further to around 10,000 gallons per ton.

The mill pumps water from its own wells, so is not so much concerned with the saving of water as it is with the saving of fibrous material which is lost when the waste water is discharged.

A good reason for continued research to develop a successful method of commercially pulping Douglas fir lies in the comparative values of Douglas fir lumber from 1909 to 1932.

The average "mill run value" of Douglas fir lumber at West Coast sawmills in 1909 was \$12.44 per M feet, in 1923 \$26.99, in 1931 \$12.05 and in 1932 \$10.63.

PORT TOWNSEND WINNERS OF 10 AND 15 YEAR SERVICE PINS



Back row, left to right: C. W. Hoaglin, ten-year pin; J. H. Quigley, fifteen-year pin. Front row, left to right: Henry Savard, ten-year pin; E. W. Erickson, Resident Manager, fifteen-year pin; William Cottrell and Walter Robinson, ten-year pins. A. B. Lowenstein, former resident manager and winner of a ten-year service pin, is now Sales Manager of the National Paper Products Company with headquarters in New York City, and was unable to be present when the photograph was taken.

PUBLISHERS TALK DEVELOPMENT OF ALASKAN NEWSPRINT

J. H. Cunningham* in *Editor & Publisher* says: "Return of Paper Making to U. S. Urged—Forces Converging to Increase Costs of Eastern Canadian Newsprint—Transfer of Industry to South, Northwest, and Especially Alaska, Seen as Economically Feasible and Profitable."

A new viewpoint toward the newsprint situation on the part of newspaper publishers is evident by the appearance in the December 8th, 1934 issue of *Editor & Publisher* of an article by Mr. J. H. Cunningham urging the return of the newsprint industry to the United States.

Mr. Cunningham not only urged the return of newsprint manufacture to this country because of the appearance of unfavorable factors in Eastern Canada, but he specifically recommends the development of newsprint manufacture in Southeastern Alaska. His December 8th article is followed up by a letter to *Editor & Publisher* of January 5th, 1935, in which he again compares the opportunity of producing newsprint in Alaska at low cost with the increasing costs of making it in Eastern Canada.

The appearance of Mr. Cunningham's article and letter in *Editor & Publisher* is indicative of a rising interest on the part of newspaper publishers in developing sources of newsprint supply in the United States to offset the growing political control of the Canadian newsprint industry. American publishers do not want to be in a position where they can be dictated to by the Canadian government.

It is significant of a possible changing opinion toward paper making in the U. S. that anyone closely connected with the Eastern Canadian newsprint industry should "discover" the possibilities of making low cost newsprint on the Pacific Coast and in Alaska.

Summary of Mr. Cunningham's Article

Next to wheat newsprint manufacture is Canada's largest business.

*According to *Editor & Publisher* Mr. Cunningham has been connected with the newsprint industry for 25 years, largely on the manufacturing end in Canada. He has been with numerous large companies, his last connection being with the Consolidated Paper Company. His experience included participation in the merger negotiations in 1932 between leading Canadian producers, and gave many opportunities for studying the important factors influencing Canadian costs.

Exports of newsprint to the United States during 1934 will reach about 2,000,000 tons of a value of \$85,000,000. Directly and indirectly the Canadian newsprint industry supports a large percentage of Canada's population.

Thirty years ago the United States made most of its own newsprint. Today 70% comes from Canada. It is desirable in view of American unemployment, to bring this newsprint production back

home, if it can be done economically. Mr. Cunningham thinks the shift back to this country is possible in the not too distant future due to the growing importance of unfavorable factors in the Canadian situation. He enumerates these unfavorable factors beginning with a comparison of the Eastern Canadian timber situation with that in the South, the Pacific Coast and Alaska.

Growth of timber in Eastern Canada is slow requiring from 70 to

In a letter appearing in *Editor & Publisher* for January 5th, 1935, apparently written after the publication of his article on December 8th, 1934, Mr. Cunningham says in part:

"President Roosevelt in the three great power developments undertaken on the Tennessee, Colorado and Columbia rivers, is establishing what he calls "yardsticks" by which to measure the price of privately supplied power. It might be very much in the interest of U. S. publishers to supply themselves with a similar "yardstick" by making a preliminary rough estimate of the probable delivered cost of Alaskan paper at Atlantic seaboard points. Such an estimate should be neither difficult nor expensive to make. The Federal Power Commission and the Forest Service can supply the necessary information for working out the power and wood costs. Fuel oil or coal prices could be secured from the sellers of these commodities. The cost of labor, repairs and mill supplies could be estimated from performances of existing mills, though these might be improved upon in a new installation. Shipping costs should be readily obtainable.

"There are some rather unique features of the Alaskan situation whose attractiveness cannot be expressed in figures. Power in almost all other localities is developed with the ultimate end in view of retail sales, or use in other more remunerative fields than newsprint. An Alaskan manufacturer need fear no such competitive diversion. He would have a vast supply of very accessible wood in perpetuity with no risk of serious losses by fire. His woods operations would be continuous, not seasonal. He would have water shipment the year round.

"The Canadian manufacturers appear to be working more effectively in combination than ever before, the stragglers being prodded when necessary by Government authority or otherwise. The Southern publishers have taken concerted action in forwarding the Southern project. A small Alaskan development might be very successful, but the full benefits would not be secured unless it was on a large scale to require the interest and backing of a syndicate of publishers in the great Atlantic seaboard ports."

PACIFIC PULP & PAPER INDUSTRY

100 years, while that of the South, Pacific Coast and Alaska is rapid. The yield per acre is greater by several times on the Pacific Coast and in Alaska than in Eastern Canada. Logging and transportation is difficult in Canada compared to Pacific Coast which is highly mechanized.

Cost of Canadian Pulpwood Rising

The end of cheap pulpwood in Eastern Canada is in sight Mr. Cunningham believes. Low cost in the past has been due to skill and efficiency of French-Canadian lumberjacks who was willing to work for very little money. He is now getting more money due to political pressure on the mills and will probably obtain still higher wages.

Forests close to the Canadian mills have been largely cut away, necessitating long hauls or river drives. Some logs now require as much as two years to reach the mill. Forest fire protection has been poor and large areas of timber have been burned. Opening up of more remote timber areas will be accompanied by higher costs due to new railroads, roads and other permanent improvements. More working capital will be required.

Power No Longer So Cheap

Cheap power was originally a source of strength to the Eastern Canadian mills. Hydraulic power is disappearing due to increased efficiency of electrically driven machines. Generated power, however, is now costing more than the hydraulic power.

Most of the Eastern Canadian mills possessing good power sites sold them to utility companies, or power companies have assumed control of the paper companies with accompanying high financing charges which increased rates to the mills.

Much Equipment is Obsolete

Mr. Cunningham points out that a number of Canadian newsprint mills are burdened with obsolete equipment.

Freight and Tariff Rates High

The location of many mills is poor from the standpoint of excessive freight rates to be paid on incoming supplies and outgoing newsprint. Canadian tariff rates on incoming supplies are high, thus adding to the cost of the finished product.

Excess Capacity a Burden

During the first nine months of 1934, Mr. Cunningham states, the

Eastern Canadian mills operated at about 75% of rated capacity, which means some mills were entirely shut down and others were running at less than 75% of capacity. This fact increases the cost per ton of newsprint. To reduce this excess fixed cost per ton Canadian mills have been willing to accept overseas orders at less than American prices in order to build up total production.

Elimination of Weaker Units Difficult

Although many mills should be eliminated it is very difficult to bring this about. Many of the older plants are owned by the larger companies and are kept alive in the hope of better volume and prices, but they are a financial drag on the stronger mills owned by the same group. Towns have grown up around the mills and must be supported by mill operation. This has become a political problem and according to Mr. Cunningham is one of the causes for political intervention in the newsprint price situation.

The Canadian banks have kept some mills going rather than lose their loans. To eliminate the high cost mills would have serious effects



Aerial view of pulp timber along the shores of an arm of the Pacific in Southeastern Alaska

on their owners, the communities, the banks, the power companies and other interests.

Allocation of tonnage has been tried as the remedy but is not fully successful for it keeps costs high.

Patriotism a Strong Factor

Canadian opinion seems to be growing that it is a patriotic duty to obtain the highest possible return from national resources (i. e. from timberlands). The Natural Products Marketing Act is an example of this feeling. It gives the government authority to control industries where the return on natural resources is considered too low. National pride is very strong and in some instances results in prejudices against the United States particularly over the debt controversies.



**BILL WEILL LEAVES
SUPPLY COMPANY**

W. R. Weill, manager of the Pacific Coast Supply Company since July 1928 has resigned effective February 1st. Mr. Weill did not announce his plans prior to leaving for the East.

Under Mr. Weill's management the business of the Pacific Coast Supply Company was materially expanded and representation for a number of prominent makers of supplies obtained, among them being F. C. Huyck and Sons, Eastwood-Nealey Corporation, E. D. Jones & Sons, Union Screen Plate Company, Heller Merz, General Electric Company and the Norton Company.

Mr. Weill was connected with the Crown-Willamette Paper Company for about twenty years and was widely acquainted with pulp and paper makers and executives up and down the Coast.

What Is the Answer?

Mr. Cunningham says, "It will be seen from the above that there are a number of forces, physical, financial and political, all converging to bring about higher costs and prices for Canadian newsprint. What will the answer be? It is entirely possible that it should be a reversion of a great part of the industry to United States territory."

Possibilities in the United States

Mr. Cunningham states the possibilities of various sections of the United States, the South, the Pacific Coast, which is already capturing a larger part of the sulphite pulp market, and Alaska. He points out that the Federal power development in Washington, the Grand Coulee Dam, offers an opportunity for newsprint.

He quotes from government bulletins analyzing the opportunity existing in Southeastern Alaska for making low cost newsprint, pointing out the timber resources, the power sites, the all-year logging operations and the lack of need to keep a supply of pulpwood at the mill. A comparison of other costs is made with Eastern Canada and Alaska, the conclusions favoring Alaska.

Mr. Cunningham concludes his article with this statement, "The Government has decided that it would not be suitable to use PWA funds in constructing a Southern project. Would an Alaskan project, of which its own timber (the government's) and its own water power would be the basis, and which would be very definitely "self-liquidating" be subject to the same ruling?"

RETURN FROM EUROPE

Dr. R. M. Pickens and Ferdinand Schmitz, Jr., assistant manager of the Rainier Pulp & Paper Company of Shelton, together with A. G. Natwick, assistant manager of the Camas mill of Crown-Willamette returned to their homes around January 15th after two months and a half abroad.

Sulphite pulp and paper mills were inspected in Sweden, Norway, Finland and Germany. Cooking methods were studied as well as systems of waste disposal.

Ferdie Schmitz reports he found a copy of *PACIFIC PULP & PAPER INDUSTRY* at a pulp mill in Northern Norway, and he remarked he didn't know he had been chosen as chairman of the Pacific Coast Division of the Superintendent's Association until he picked up a copy of the December number of this journal in New York upon his return.

CALIFORNIA FRUIT WRAP HAS GOOD YEAR

The California Fruit Wrapping Mills, Pomona, Calif., has concluded a very active and successful year in 1934, according to Erik Fernstrom, and started 1935 with operations at full speed.

During the past year the company has spent some \$70,000 in mill improvements, including a new suction press, a new printing press, another cutter, and addition 60 by 60 feet for storing pulp, additions to the equipment in the machine shop, a new laboratory building and equipment. The company plans to

construct still another warehouse in 1935.

The Pomona mill is now manufacturing a new reinforced kraft brushing paper for use in covering tender plants in the field. The new type brushing paper has strips of heavy 60-lb. kraft attached parallel with the web on both edges of the paper, and several similar strips spaced in between. The reinforcement prevents the paper splitting in the fields, and does away with much patchwork after heavy rains. Patent has been applied for on the new product and is now pending.

F. O. Fernstrom, president of the company, left Christmas eve for Europe. He is traveling through Scandinavia and France, and is expected back at the mill about Feb. 1.

CHRISTENSEN BACK IN HOQUIAM

Andrew Christensen of the Grays Harbor Pulp & Paper Company, Hoquiam, Washington, recently spent several weeks at the Camas mill where he did some special work. He has returned home.

OLIVER MAKES COAST CHANGES

Oliver United Filters, Incorporated, announces the resignation of James A. Lane, Western Division Sales Manager, who has accepted an executive position with Holly Sugar Corporation.

P. J. McGuire, formerly in Oliver's Los Angeles office, has been appointed to succeed Mr. Lane as Western Division Sales Manager with headquarters in San Francisco.

NEW ZEALAND KRAFT MILL TO BE BUILT THIS YEAR

Of Interest to Pacific Coast Because Planted Forests—
Cut on Perpetual Basis—Will Be Important
Future Source of Raw Material



HE major portion of the plans are already completed and construction is expected to start early this year on the kraft pulp and paper mill of the Whakatane Paper Mills, Limited, of Whakatane, New Zealand, according to L. A. DeGuere of Wisconsin Rapids, Wisconsin, pulp and paper mill engineer in charge.

The Whakatane Paper Mills, Limited, was originally called The Timberlands Woodpulp, Limited, a forest growing organization, whose executives have for a number of years been regular readers of PACIFIC PULP & PAPER INDUSTRY. The change in name was just recently made to more accurately describe the company's new operations. Mr. H. A. Horrocks has been elected managing director.

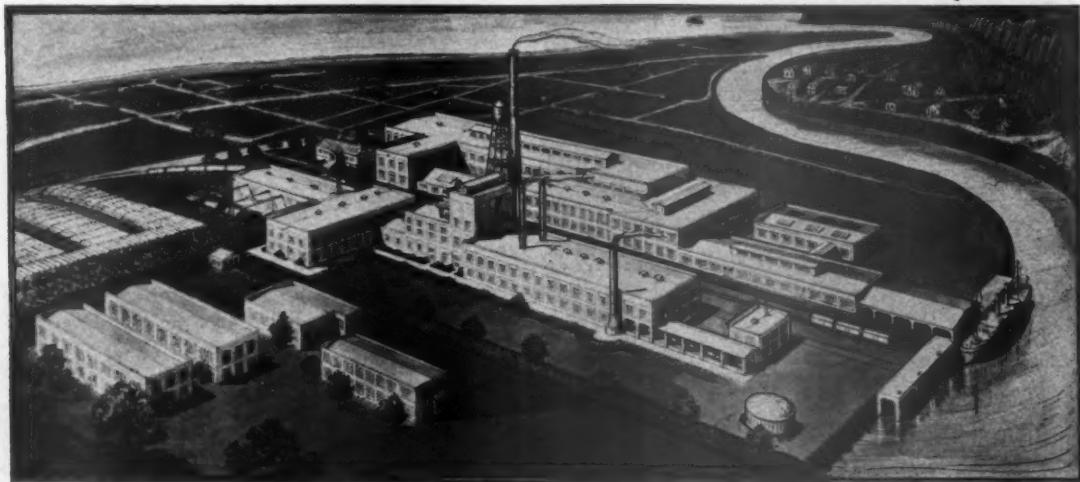
In the latter part of 1931 Professor H. H. Corbin, a veteran forester

of New Zealand associated with Timberlands Woodpulp, wrote this journal stating that Mr. Ralph Worley, a civil engineer of Auckland, New Zealand, and himself would shortly arrive on the Pacific Coast of the United States for the purpose of thoroughly investigating the manufacture of all types of pulp and paper, with the intention of later constructing a pulp and paper mill in New Zealand to utilize some of the island's timber in producing paper for consumption in that country and in Australia. Professor Corbin asked that PACIFIC PULP & PAPER INDUSTRY put Mr. Worley and himself in touch with pulp and paper mill engineers and manufacturers of pulp and paper mill equipment. This was done, and when Professor Corbin and Mr. Worley arrived they interviewed a number of engineers and visited many mills in a very short time. Together with H. A. Horrocks, an Auckland attorney and an officer of the Timberlands Company, who arrived later, the three travelled eastward visiting pulp and paper mills in Canada, the Middle West, the East and the South.

Their contacts with Mr. De Guere resulted in his being selected to make a preliminary study of the possibilities of building a successful pulp and paper mill in New Zealand. Mr. De Guere left early in January, 1932, traveling the 6200 miles to New Zealand and devoting six weeks time there to a thorough analysis of the practical phases of making pulp and paper from the native forests and from the planted forests of Timberlands Woodpulp, Limited.

The planted timber, which De Guere studied, is "insignis pine," originally imported from California. In New Zealand's climate this pine grew much more rapidly than in its native state. Timberlands Woodpulp, Limited, was organized many years ago for the purpose of planting trees and then harvesting them upon a perpetual basis. At the time Mr. De Guere was employed a portion of the planted timber was nearing commercial size, being seven years old. Mr. De Guere reported that the trees grow to a usable size in from 10 to 12 years.

The company has in addition to



De Guere & Worley's Drawing of the Whakatane Paper Mills, Limited, Whakatane, New Zealand, as the plant will appear when completed.

Whakatane River at this point its own plantations a large tract of native timber suitable for pulp and paper manufacture. In the early years of operation the mill can also draw upon thinnings from government plantations of insignis pine.

Mr. De Guere returned to this country late in March, 1932. Tests were conducted by the U. S. Forest Products Laboratory in Madison, Wisconsin, and the pine found suitable for pulp, particularly sulphate pulp. Plans were begun by Mr. De Guere in conjunction with Mr. Worley with whom he formed a partnership in the engineering firm of De Guere & Worley, New Zealand Insurance Building, Auckland, New

Zealand. Continuous study and planning has been carried on by Mr. Worley in New Zealand and Mr. De Guere in this country, which has now resulted in the completion of plans for a kraft pulp and paper mill.

The Proposed Kraft Mill

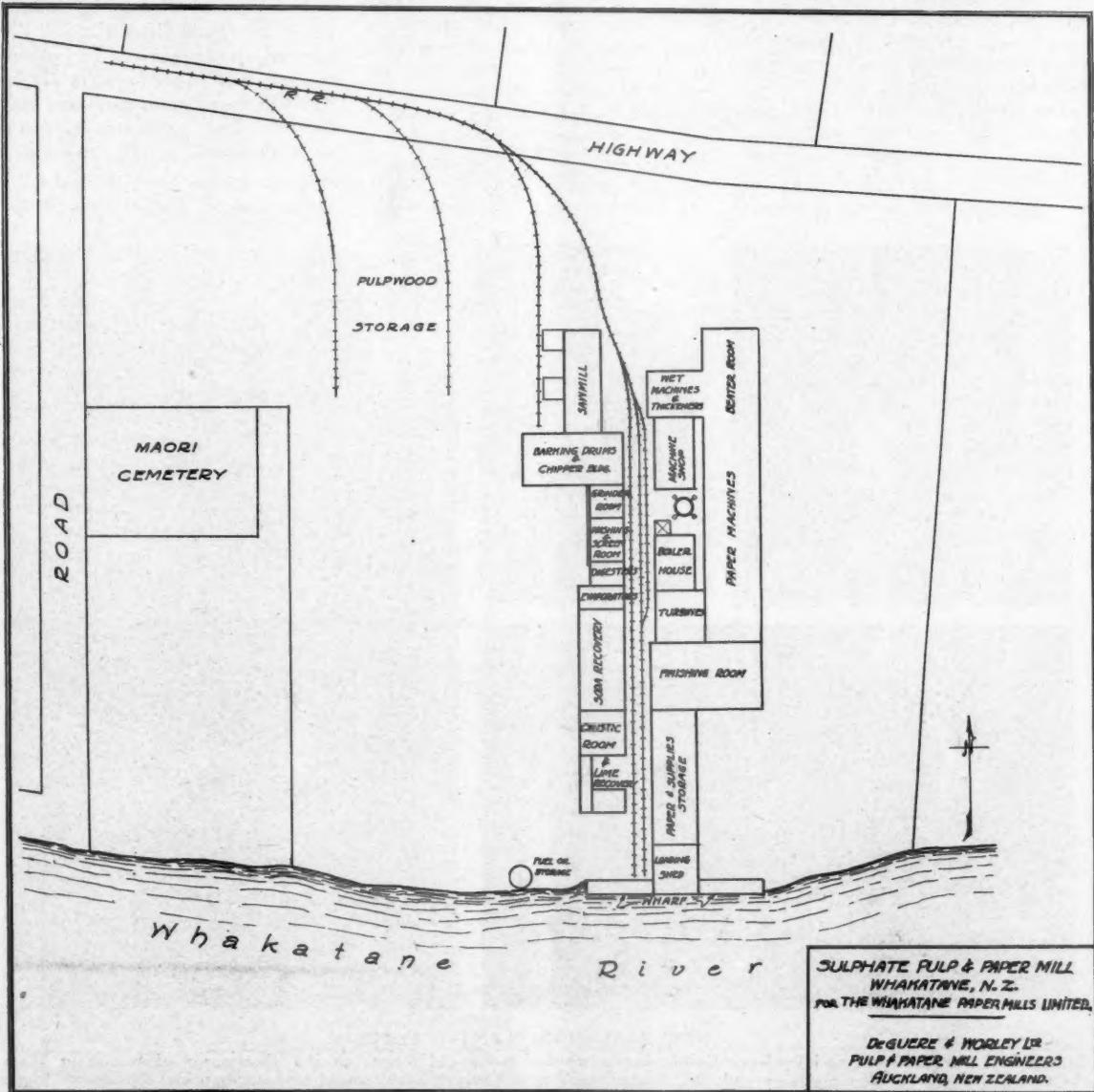
Mr. DeGuere's description of the Whakatane Paper Mills plant follows:

The plant of The Whakatane Paper Mills, Limited, will be located about 200 miles southeast of Auckland, New Zealand, on the Whakatane River a short distance from its mouth and adjoining Whakatane, a town of about 2,000 people. The empties into the Bay of Plenty and

this location will be accessible for in and out shipments by both rail and water.

Timber Close to Mill

The company timber plantations are located within fifteen miles of the mill site and they will have their own railroad for transporting logs from the logging district to their mill. For the first few years timber will be supplied from native forests, a large tract of which was purchased some time ago. The timber from this district has been put through a series of pulping tests by the Forest Products Laboratory at Madison, Wisconsin, and found to be admirably suited to the manufacture of all grades of kraft paper,



Ground Plan of the Whakatane Paper Mills, Limited, Whakatane, N. Z.

PACIFIC PULP & PAPER INDUSTRY

and has been pulped satisfactorily by all the commercial processes. Some of the logs that will be used for pulp before the plantation timber is ready are as large as West Coast spruce or fir trees and will involve the usual saw mill type of break-up plant. The plantation trees, however, will be relatively small and will be handled, barked and chipped at a minimum of expense.

80 Tons Initial Installation

The initial installation will be a sulphate pulp mill of 60 tons daily capacity, a ground wood plant of 20 tons capacity, and a paper mill to utilize the product of the pulp mills. The plant will be self-contained throughout as it will manufacture its own power, own its timber, railroad, and probably eventually its own steamers for carrying the finished product to the centers of importance in New Zealand and Australia. The plant will manufacture boards, machine-glazed and machine-finished paper.

The plant will be equipped with

the most modern up-to-date machinery in all departments and will have a number of features not heretofore incorporated in plants of this type. It will be substantially built of reinforced concrete and steel construction and so laid out that future expansion can take place without in any way interfering with operation or any alteration in the original installation.

All-Year Timber Operations

The site includes more than enough land to permit future expansion to 300 tons per day and provide ample storage for pulp wood supplies. Since the timber plantations are only a few miles away and operations can be carried on in the woods all year round, there is no necessity for carrying a large supply of pulp wood on hand at the mill. From their own extensive plantations the company will be assured of a perpetual supply of pulp timber close at hand and at a low cost delivered to their mill which is quite a contrast to existing conditions in most paper manu-

facturing localities in the U. S. and Canada. Pulp timber grows to usable size on these plantations in from ten to twelve years.

The perspective view and ground plan will give a fair idea of what the plant will look like when completed. The engineering phases of the project will be handled by the firm of De Guere & Worley, Limited, of Auckland, New Zealand, consisting of L. A. De Guere, engineer, Wisconsin Rapids, Wisconsin, and R. P. Worley, C. E., of Auckland, N. Z. The major portion of the plans will be made in Wisconsin Rapids, Wisconsin.

THE COMPANY'S TIMBER OPERATIONS

Timberlands Woodpulp, Limited (now the Whakatane Paper Mills, Limited) was organized to establish the pulp and paper industry in New Zealand based upon sustained yield forestry. The company is now in its tenth year.

Quoting from the May 23rd, 1932, prospectus of Timberlands Wood-



NEW ZEALAND'S PLANTED FORESTS

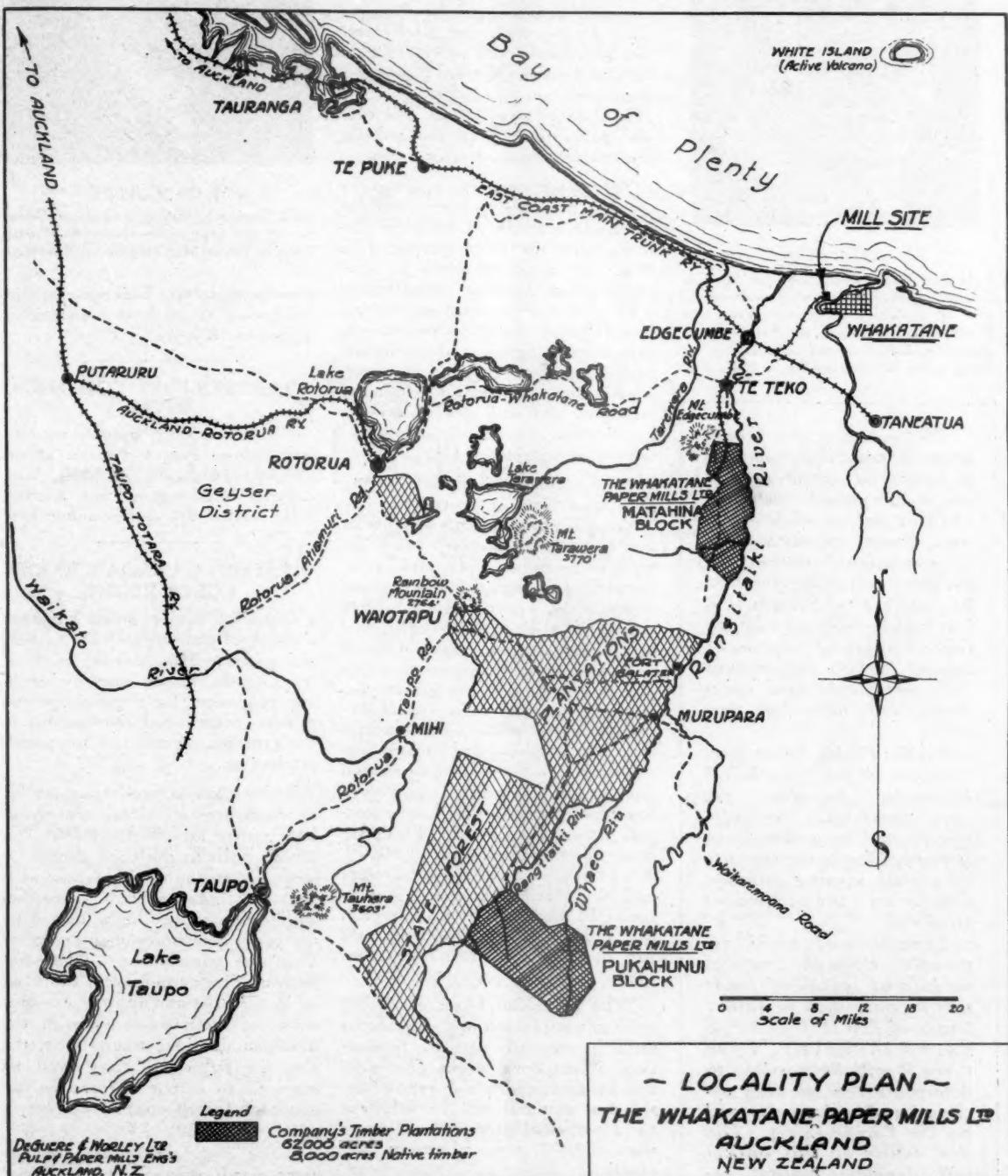
Upper left: Mr. DeGuere and Professor Corbin inspecting the 28-year-old forests on the government plantation at Waio-Tapu. Upper center: Mr. DeGuere and Mr. Worley standing in front of a 28-year-old pine on the same plantation. Right: A 7-year-old insignis pine forest on a private plantation. Trees four to eight inches in diameter. Mr. Worley in the picture. Lower: Showing size and density of the planted pine forest. These pictures were taken in February, 1932.

pulp, Limited, "To the pulp and paper company seeking a base of operations a matter of most vital importance is that of the raw material supply—PULPWOOD. It is obvious that a pulp mill could not be operated in a sandy and treeless desert nor could one be operated in

a wooded country without first taking into careful consideration the nature of and the prospects for SUSTAINED YIELD from the forests upon which the pulp mill depends. The native forests of Australia and New Zealand both as to species suitable, permanence of sup-

ply, expensive logging costs, etc., present so unfavorable a combination of economic factors that their utilization for the manufacture of woodpulp on a commercial scale is highly improbable—and in comparison with the man made forests of the Dominion not economic.

(Continued on next page)



Map of the timber plantations of the Whakatane Paper Mills, Limited, formerly Timberlands Woodpulp, Limited. Note that the company's plantations are adjacent to those of the New Zealand Government's from which the early pulpwood supply will be drawn through thinning until the company's trees are ready for cutting in a few years.

PACIFIC PULP & PAPER INDUSTRY



L. A. DE GUERE

Pulp and Paper Mill Engineer of Wisconsin Rapids, Wisconsin. Member of the firm of De Guere & Worley, Pulp and Paper Mill Engineers of Auckland, in charge of designing and constructing the plant of the Whakatane Paper Mills, Ltd.

The fact that the Whakatane Paper Mills, Limited, is basing its operations upon a perpetual sustained yield of pulpwood from its own timber plantations is of exceptional interest to Pacific Coast mill operators because second growth timber will become an increasingly important source of supply in this region, not only for plants now operating, but also for new mills.

On the Pacific Coast, particularly in the "fog belt," hemlock, Douglas fir, spruce and white fir pulpwoods can be grown on a perpetual basis, the rapidity of growth varying with the locality and the method of stocking.

Examples of rapid regrowth through natural seeding of logged-off lands will be published in future issues of PACIFIC PULP & PAPER INDUSTRY. From these it will be possible to determine the growing cycles of usable size pulpwood on the Pacific Coast. The first article on this subject will describe natural regrowth in the Grays Harbor area.

"Attention being focused on the plantations of the New Zealand government located on the Rangitaki Watershed of the North Island (where to date, 1932, approximately 190,000 acres are established—see map) it was quickly recognized that thinnings alone from this area constituted a potential interim source of valuable raw material. The time, however, was not ripe for the company to approach the government and so a large block of 41,124 acres in this locality—better known to most of our stockholders as "Pukahunui" was purchased in 1925 and plans formulated for growing the initial pulpwood crop.

"The company's experts are of the opinion that this property and the Matahina block of 21,000 acres further down the river (acquired in 1931—see map) possesses in their geographical location—embodying a 12 to 16-year growing and cutting cycle—hence cheap pulpwood— inexpensive logging and transport costs—plentiful supply of fresh water—cheap power development resources and easy sea access—a combination of economic advantages unrivaled within the Dominion.

"The Pukahunui block is being developed along approved forestry lines—it is provided with 80 miles of well constructed interior roads—180 miles of firebreaks—pulpwood compartments averaging 500-acre units—stocking approximately 1,000 trees to the acre—substantial bridges are erected—administrative buildings are well designed and ample for the purpose—a gravity water supply system is installed—proper survey plans made—including a topographical and contour survey on which the timber extraction lines will first be plotted. This work has been carried out under the general supervision of the Establishment Committee comprising Mr. H. A. Horrocks, managing director and New Zealand attorney; Professor H. H. Corbin, technical director; Mr. J. H. Buddle, accountant, and Mr. S. Anderson, plantation manager.

"The Matahina block of 21,000 acres is not planted and will not be until the company gets into production. When both blocks of timber are in sustained yield production the new material will be sufficient for a perpetual production of more than 100,000 tons of paper annually."

Insignis pine grows to usable size in about 12 years time when it will be anywhere from six to twelve in-



R. P. WORLEY

Civil Engineer of Auckland, N. Z. Member of the firm of De Guere & Worley, Pulp & Paper Mill Engineers, Auckland.

ches in diameter. This same species has grown as much as twenty-seven inches in 18 years.

CHEMIPULP AT COLUMBIA RIVER

The Chemipulp System recently installed on No. 3 digester at the Columbia River Paper Mills, Vancouver, Washington, was successfully started up on December 31st.

EASTERN CANADA'S WOOD COSTS RISING

Increased cost of wood has been a factor of growing concern to pulp and paper mills operating in Eastern Canada. Labor costs in handling pulpwood have gone up and this has contributed considerably to the growing expenditure for woods production.

Rising costs of production, so far as woods operations are concerned, have not so far affected British Columbia mills to the same degree. A large proportion of the pulpwood is cut by independent contractors working on timber limits owned by the paper companies or under grant from the government. There has been no hint of pulpwood shortage, as in the east, and snow is a minor cause of interruption even in the northern districts; where as in the east the pulpwood drive must be confined to certain seasons on account of frozen rivers and heavy snow.

Labor costs are higher on the coast, partly due to minimum wage laws and the generally higher wage standard as compared with Quebec and some parts of Ontario.

Perpetuation of the forest industries of the West is a matter of such fundamental importance that Pacific Pulp & Paper Industry presents in full a recent report of the Technical Advisory Committee on Forestry of the Washington State Planning Council. This report sets forth facts that are of the utmost significance, showing how the welfare of the state rests upon the basic forest industries. The report, submitted at a recent meeting of the State Planning Council by Committee Chairman Hugo Winkenwerder, dean of the College of Forestry, University of Washington, carries with it a detailed suggested plan for the development of Forestry in this state which is worthy of the closest study and attention. This is the first time that any such comprehensive plan has ever been offered. It is of interest not only to every person in the State of Washington but to residents of other western states where the forest industries are likewise of fundamental importance, and to all pulp and paper manufacturers throughout the United States because in 1933 the State of Washington led all other states in the cutting of pulpwood with 1,076,752 cords.

Report of the Technical Advisory Committee on Forestry of the Washington State Planning Council

By

HUGO WINKENWERDER
Chairman

COMPARED with other regions of the world the State of Washington with its potential major resources in mines, fisheries, farms, and forests, its wonderful climate, with plenty of water, its water-power, its harbors, its wild life, and its scenic and recreational resources gives us not only a balanced richness for abundant creation, materially, physically and mentally, but the opportunity for producing products of superior quality that we should be able (in fact are already doing so in a number of instances) to compete with the world at premium prices and it only remains for us to take advantage of the richness that nature has bestowed upon us so bountifully.

Throughout this report reference is made to normal times—meaning of course, prosperous times. This has been done both in quoting figures and in referring to future possibilities.* Whether or not we get back to normal will depend upon how thoroughly and how wisely we plan to take advantage of our very superior opportunities and

how willing we are to support such a plan morally and financially.

*Unless otherwise stated the figures were chosen chiefly from the years 1926-1929 as the more accurate figures may have been available. Although some might consider these figures above normal they serve the purpose of this report admirably and are fair because the report intends to show the permanently potential possibilities. In all comparisons on an annual basis figures from the same year were chosen.

In this plan we must give to our forest resources and the possibilities for state development which they offer a place in the foremost ranks.

The economic necessity, the special opportunities and our strategic position for taking advantage of them are strikingly indicated by:

- a. The Land Situation.
- b. The Economic Value of the Timber Industries.
- c. The Special Advantages Washington offers for Timber Production.
- d. The Situation in Other Sections of the United States.

THE IMPORTANCE OF THE FOREST RESOURCES OF WASHINGTON IN RELATION TO THE ECONOMIC WELFARE OF THE STATE.

a. **The Land Situation.**—The topography and soil conditions of Washington are such that we must look to the perpetuation of the forests if the best use is to be made of all the lands. From the standpoint of economic land use Washington is above all else a timber state.

TABLE I.
LAND CLASSIFICATION

Total Land Area	42,755,040 acres
1. Potentially good Agricultural Land	25%
2. Land chiefly suitable for Grazing	25%
3. Potentially permanent Forest Land	35%

PACIFIC PULP & PAPER INDUSTRY

4. Useful chiefly for Scenic and Recreational purposes	15%
Total	100%

*Without the results of detailed field studies available these figures have for some years been considered fair estimates. In 1927 the Supervisor of Forestry estimated only 10% suitable for cultivation. Until the studies of the Technical Advisory Committee of the Planning Council on Land Classification are completed the figures given will need to be accepted as the more conservative figures. Indications are that less than 25% will be ultimately classed as high grade agricultural land.

With so large a proportion of the land area of the state potentially permanent forest land any scheme of State Planning must consider the use of the forest lands one of the major problems.

The forest land problem is rapidly becoming one of the most aggravating of the State. Cut-over lands are being acquired by the counties for delinquent taxes at an alarming rate. Many of these lands have been left in a practically unproductive condition and without care are not adding much of anything to the productive value of the state. In fact, they have for the most part been changed from areas that were paying taxes and supporting industry and labor to areas that are a burden to the community.

According to the State Commissioner of Public Lands the various counties of the State now (1934) have approximately 1,250,000 acres obtained through delinquent tax foreclosures. The most practical solution of this problem is for the State and the Federal Government to take a goodly proportion of them over and manage them as reforestation lands.

b. The Economic Value of the Timber Resources.—The early development of the State of Washington hinged largely and of western Washington almost wholly on the timber resources. Even today (using figures for 1929) the economic welfare of the State is more dependent upon the forest resources than all other resources combined.

TABLE II.

RELATIVE FINANCIAL VALUE OF MAJOR RESOURCES IN TERMS OF TOTAL PRODUCTION (1929 expressed in round numbers)*

1. Fisheries	\$ 11,000,000
2. Minerals	20,500,000
3. Eggs and Poultry	30,000,000
4. Dairy and Livestock	75,000,000
5. Farm Produce	158,000,000
6. Forest Products	300,000,000
Total	\$594,500,000
All except Forest Products	\$294,500,000
All Agricultural Products	\$263,000,000

*1-5, incl., furnished by Seattle Chamber of Commerce (Census Figures). 6 checked by West Coast Lumbermen's Association.

Table III.

Statistics Bearing Directly Upon the Value of the Forest Industries* (Figures for 1926)

1. No. of Timber Owners in the State	12,000
2. No. of Firms engaged in Production of Forest Products	2,500

3. Lumber Production (20% of total of U.S.)	
Ft. B.M.	7,319,852,000
4. No. Shingles (65% total of U.S.)	5,346,205,000
5. No. of men Employed in Lumber Industry	83,700
6. Paid in Wages (65% entire industrial payroll)	\$112,500,000
7. Value of Products Manufactured from Lumber compared to all Manufactured Products	33%
8. Value to Permanent School Fund, Public University, Scientific, Agricultural, and Normal 1927	25,000,000
b. Leaving \$1,500,000 interest yearly Ultimate value will be over	50,000,000
9. Total receipts from National Forests to State School and Road Fund, 25% of receipt up to 1927	1,143,178
10. Taxes paid by lumber industry approximately 16% of total tax income of State	

*From pamphlet distributed by the State Supervisor of Forestry.

INDIRECT VALUE OF FOREST RESOURCES—INDUSTRIAL

These are values that cannot be measured directly in dollars and cents, nevertheless are as important as any others in the consideration of the economic value of the forest resources.

Almost every industry of the State is to a very substantial degree dependent upon the timber resources. Using the Transportation Industry as an illustration: For 30 years the railroads depended upon forest products as the mainstay of their industry. In 1926, 72% of the freight shipped out of the state by rail was composed of forest products and during that same year 1,000 vessels cleared from our ports with lumber cargoes. This does not include the hauling of logs and forest products within the State.*

*Report of State Forester, 1927.

In addition, the railroads hauled indeterminate amounts of machinery and supplies consigned to loggers and lumber manufacturers; the shipping gave employment to sailors and dockyard workers as well as to longshoremen, to say nothing of the men employed in the purely business aspects of the transportation industry.

The bulk of the business of the machinery block and tackle dealers is furnished by the forest industries. Eighty percent of the \$300,000,000 normal value of the timber industry is distributed within the State for wages, supplies, replacement of machinery, reconstruction, and so on. The volume of business done by wholesale and retail establishments and the success of banks and bond houses has been seriously influenced by the condition of the lumber business. Sections in the State that were once prosperous because of the timber resources are now

dotted with ghost towns, with their abandoned stores and homes and even farms, because the soil was never meant for farming, and the timber resources were depleted. One such section is that lying between Centralia and Willapa Harbor.

A Federal pamphlet is authority for the statement that ninety percent of all other values on Grays Harbor and other communities similarly situated would be destroyed with the collapse of the timber industry of these regions.

WATERSHEDS AND EROSION

It is now a proven fact that forests through their influence on increasing seepage and decreasing run-off have a marked effect on the regularity of flow in the streams. Thus they have an important bearing on erosion, floods, and water for irrigation, power, and municipal supplies, as well as on the silting up of reservoirs and on depositing layers of raw sub-soil over the fertile lands in the valleys.

No special studies have ever been made of this problem in the State of Washington that are broad enough to give us a satisfactory picture of the situation. Due to limited clearing and an unusually quick growing cover, together with the porosity of the soils in the area west of the Cascades, the problem has not become one of major importance although we have had shortages of water, and floods that were undoubtedly aggravated by forest destruction, but the subject needs further study. In eastern Washington the problem seems more serious.

The problem of the maximum use of watersheds for all purposes with particular reference to their economic relation to timber production as well as their influence on water conservation is one that will receive considerable attention in the near future. Some restrictions may be placed upon them in connection with their use for municipal supplies.

At present the following acreages are in use for various purposes:*

1. Municipal Watersheds	Acres
Inside National Forests	5,652,370
Outside National Forests	5,814,020
2. Irrigation	
Inside National Forests	5,042,700
Outside National Forests (estimated)	over 2,000,000
3. Power	
Inside National Forests	3,429,740
Outside National Forests	1,121,800

*In the figures presented there is some overlapping of acreages, amount not yet determined.

RECREATION

The scenic resources and the opportunities for recreation in the State are not surpassed by those of any other State. "A National Plan for American Forestry" is authority for the statement that in 1929 the amount of money spent for recreation in the United States amounted to a total of \$1,750,000,000, more than the annual output of either the petroleum, the automotive, or the iron and steel industries. In some of the Northeastern and Lake States the use of the natural scenic attractions has been for a long time an established business, and the states are building it up. Maine values hers at

PACIFIC PULP & PAPER INDUSTRY

19

\$100,000,000 during normal times. In Washington, where we are far from the denser centers of population it is claimed that this business already is worth from twelve to fourteen million dollars, and hence is rapidly becoming an important source of income. Although we are not close to the population centers, our attractions of mountains, forests, streams, lakes, and beaches are far superior to those of other regions. Where, for example, can one go skiing in snows of the mountains in the forenoon, and take a dip at an ocean beach in the afternoon of the same day?

The value of out-door recreation is not merely commercial. Of even greater value is its effect on the physical, mental, and moral well-being of our people, and the importance of this grows with the opportunity for more leisure.

WILD LIFE

The conservation of wild life is closely associated with recreation. Many animals cannot live in deforested areas, and many species of fish will thrive only in the waters of streams and lakes fed by the run-off and seepage from forested slopes. Although it is difficult to measure the worth of the wild life resources, their value must be measured both from the standpoint of recreation and food.

INVENTORY OF WASHINGTON'S FOREST RESOURCES*

Standing Timber

As a result of the Forest Survey conducted by the United States Forest Service, we are now in a position for the first time of having a reliable data on the acreages of forest types, the volumes contained therein, and the rates of growth. This study is now completed on all lands west of the summit of the Cascades, and is being continued in the area east of the summit.

*Forest Research Notes No. 13; Pacific Northwest Forest Experiment Station.

SUMMARY TABLE OF FOREST RESOURCES OF WASHINGTON*

Volume of Timber by Species and Ownership Class—State of Washington

West of Cascade Summit

	Total	Percent
	M Ft. Log Scale	
Private	123,678,600	50.4
State	23,154,133	9.4
Municipal and County	2,335,320	1.0
Federal, other than national forests	7,599,359	3.1
National forests	88,487,634	36.1
Total	254,255,046	

East of Cascade Summit

	Total	Percent
	M Ft. Log Scale	
Private	9,909,000	28.1
State	4,820,000	13.7
Federal, other than national forests	6,007,000	17.0
National forests	14,510,000	41.2
Total	35,246,000	

Acreage in Major Forest Types by Ownership Class—State of Washington

West of Cascade Summit

	Total	Percent
	Acres	
Private	7,371,877	54.9
State	853,293	6.4
Municipal and County	332,777	2.5
Federal, other than national forests	511,616	3.8
National forests	4,358,898	32.4
Total	13,428,461	

East of Cascade Summit

	Total	Percent
	Acres	
Private	3,152,000	30.0
State	596,820	5.7
County and Municipal	125,000	1.2
Federal, other than national forests	2,250,752	21.5
National forests	4,363,232	41.6
Total	10,487,804	

*For details, see Report of Forest Management Committee, page 1, Section on Forest Stands and Forest Growth in the State of Washington. According to Mr. Brundage of the U. S. Forest Service probably not more than 100 million feet of the totals expressed in this table would be considered merchantable saw timber according to present logging and saw mill practice.

POTENTIAL YEARLY RATE OF GROWTH

Based on 20,128,032 acres suitable to production of coniferous timber under reasonably intensive forest management, 5,540,000 M feet B. M. of yearly growth are indicated. Under intensive utilization and proper silvi-cultural management we could grow 7,567,852 M feet B. M., or slightly more than the largest output of saw timber in the State during any one year, indicating that our conditions will enable us through proper management and utilization to maintain a lumber industry potentially as productive as during the period of peak production.

Through extended utilization of waste the value of the timber resource industries could be increased far beyond their value during the period of peak production.*

*This is one of the reasons for using figures from 1926-1929 to illustrate the value of the timber industry.

FOREST PROTECTION

Forest fires have always been a threatening menace to our forest resources, but the situation in Washington has always been met, in some degree and Washington has an enviable record for constructive protection legislation. Logging operators are held in law as responsible for the cost of fighting any fires which start in their operations.

The cost of fire prevention is borne by forest land owners, which includes both standing and cut-over acreage. This cost is met by special assessment for fire control. Less than one-fifth of the entire protection cost is paid for out of state appropriations. Four-fifths is a tax against the owner of forest land in order to meet a condition for which he is not responsible. The cause, and the ensuing cost, is best stated by

the Copeland Report, entitled "A National Plan for American Forestry." "Official estimates indicate that more than one-third of fire occurrence on forest land are caused by smokers and campers, mostly on land belonging to other people.

"Through tradition and custom, the right of the public to make use of forests and woodlands in private ownership for hunting and fishing and other forms of recreation is well established. While there are laws in many states protecting land owners against undue use of this sort, they are generally deficient if reviewed from the standpoint of protection, and are especially difficult of enforcement. The solution of the problem . . . will ultimately require the balancing of benefits and hazards and an equitable adjustment between public rights requirements and those of the land owner."

Such an adjustment must be made in Washington in order to protect both the game and timber resources. Preferably such an adjustment should take the form of added protection paid by those who incur the need of added protection.

Another important cause of forest fire, and possibly the single cause of acreage loss, is the land clearer. It is stated that fire is a necessary adjunct to land clearing, and it is a function of Government to aid in such development, and also provide the necessary safeguards.

A comparison of acreage burned over in the State of Washington attributable to both the foregoing causes—recreation and land clearing—shows the following for the years 1925-1932:

	Acres Burned Over
Recreation	258,661
Land Clearing	115,032

The lesson is shown by these figures.

The forest fire situation in Washington can be best shown by segregating the years 1917-1932 into two periods of eight years. The year 1917 is taken as a base, because it was in that year that the Compulsory Patrol Law was enacted.

	1917-24	1925-32
Number of fires	7,869	11,182
Acreage burned over—acres	1,624,731	1,437,152
Average acreage per fire—acres	206	128
Average loss per fire	\$671.25	\$184.86
Merchantable timber killed, M.B.M.	774,071	349,814
Total all damage	\$5,282,901	\$2,067,136
	Protection Cost	
State	\$ 514,112	\$ 589,669
Federal	724,236	518,996
Private	1,269,084	2,015,545
	\$2,007,432	\$3,214,210

The cost contributed by the Forest Land Owners to fire suppression does not include those costs paid by logging operators, estimated to be a sum in excess of \$3,000,000.00.

It will be noted that the number of forest fires in the period 1925-1932 increased by 3,313; or over 42%. The acreage burned over decreased by 187,579 acres, or 13%, while the average

PACIFIC PULP & PAPER INDUSTRY

acreage was reduced from 226 to 128, or 38%. Merchantable timber losses were reduced by 424,257 M.B.M., or 52%. All losses (exclusive of the value of second growth) were reduced from \$5,282,901.00 to \$2,067,136.00, or over 60%. During this period, the cost of protection to both State and Federal agencies was increased by \$370,317.00, or 33%, while the cost to Forest Land Owners increased by \$836,461.00, or 66%.

During the latter period the lessons of the previous term of eight years had been well assimilated by the private agencies, and an increased private expenditure in the several logging operations was made. State and Federal appropriations were also increased, but to a lesser extent. These figures (which include the years 1929, 1930 and 1931—the three most hazardous years in forest fire history in the state) show that the technique of fire control was vastly improved; that the public caused a greater number of fires, while the acreage covered was reduced. The value of the reduced area covered by fire cannot be shown at present, but it is certain that forest values were immeasurably increased. These values consist not only in a growing forest and potential supply of industrial raw material, but in watershed and game cover values.

With development in the means of travel and of road mileage, the fire problem is on the increase. We cannot fairly expect Forest Land Owners to constantly increase their payments for fires which they do not cause. A greater measure of state and federal assumption of responsibility for acts of its citizens is indicated, while the added protection given to cut-over land is worth consideration by the sportsmen and other groups of the state (dependent upon forest cover) as a value received which should be repaid.

The figures show authoritatively that properly developed systems of forest protection, while demanding a larger outlay, return in decreased losses far more than their cost. It is again pointed out that the figures shown are taken from official records.

SUSTAINED YIELD FOREST MANAGEMENT

We should look forward to the greatest possible production from our forest lands on a sustained yield basis.

1. The natural conditions in the State of Washington are most favorable for sustained yield management. In the forests west of the Cascades the trees grow as rapidly, they attain larger sizes, and the average yield compares favorably with any species of similar quality anywhere in the world, thus enabling us to compete from the standpoint of production possibilities with all other sections of the United States.

2. Together with Oregon, we still have west of the Cascades one-third of the standing timber of the country available for harvesting, while we are growing our new crop to maturity, and most of this is virgin timber.

3. The depletion of the timber resources nationally during 1930 was one and one-half times as great as the replacement, according to the Copeland Report.

4. Through the development of an economical method of pulping Douglas fir (which has not yet been developed), we could supply the nation's chief demands for wood pulp from our waste material.

5. Through the investigations of the Federal Forest Service we now have the basic data that will enable us to work out scientific plans for going forward with such a sustained yield program.

6. The production of timber will come from lands economically suited chiefly for timber production.

These conditions place us in a most strategic position to get permanently the maximum returns from our forest lands. It will, however, require the adoption of definite plans by our three great land owners, the federal government, the state and the private timberland owners.

The Federal Forest Service is proceeding on such a plan at present on the nearly ten million acres in the national forests of this state. The state has adopted a policy, but has been proceeding all too slowly, without any definite plans of procedure, and with woefully inadequate appropriations.

Except in a very few instances, the private timberland owners have until recently shown no disposition to be interested. In the entire history of the development of the lumber industry, surrounded as it was with conditions that prevented the development of any other policy, the policy has been to cut out at the best possible profit and move on to new fields where the process was repeated, resulting in an ingrained mental attitude that was diametrically opposed to any idea of continuing in business more or less permanently in any one locality. With what was considered as unlimited supplies of virgin timber available in the new fields, competition also was keen, there was a decided lack of any spirit of cooperation among the members of the industry, and no one company or any small and scattered group of even fairly large companies could strike out on a sustained yield policy where competition from the others would have spelled ruination.

Again, even with a developing interest most companies were insufficiently financed, interest rates have been too high for the long time period of financing required, the system of taxation applied to standing timber and cut-over reforesting lands was entirely unsuitable to this type of investment, the risks of loss from fire, insects, and fungus diseases without reasonable insurance rates were too great, and until the data of rate of growth and production were at hand (just recently made available) there were no basic data on which to plan sustained yield operations.

The present generation of lumbermen, schooled in business economics, and forestry, surrounded by a new set of conditions is gradually changing the policies of the larger timber companies.

Perhaps the most forward-looking step in American Forest Policy regarding the handling of timberlands is the adoption by the lumber industry of Article X of its Code of Fair Competition and Supplements to this Article. This code puts into effect and enforces comprehensive rules of forest practice

aimed at the beginnings of sustained forest production. It is particularly gratifying to know that the code of the Pacific Northwest lumbermen is considered far in advance of those of other regions.

STATE FOREST POLICY

The first legislation has been directed toward protection of forests from fire, and the first protection law was enacted in 1891.

The state has for many years maintained an enviable record among western states for progressive legislation. It now has in its statute books a number of very constructive forest laws. Except for those pertaining to forest fire legislation, they have, however, been largely inoperative because sufficient funds for carrying them out were not provided.

Among the more important of these are:

1. Excellent laws of fire prevention and control. These have been amended and extended almost biennially in accordance with the experiences of those administering these laws.

2. The Compulsory Forest Patrol Law enacted in 1917 which authorizes the Forestry Department to assess not to exceed in excess of five cents per acre on all timber lands in the state except when the owner permanently resides either upon or within one mile of his timber holdings, or land upon which the owner is contributing the cost of his protection to an approved timber protective association.

3. Authorization for research has been granted both to the Forestry Division of the Department of Conservation and Development and to the College of Forestry at the University, but special funds for this purpose were never provided.

4. In 1921 the Adamson Law provided for an appropriation of \$5,000.00 which authorized the state to purchase lands suitable for reforestation. Under the act 9,481 acres of cut-over lands were acquired, 5,004 of which were a gift. This law was an important recognition on the part of the legislature of a responsibility on the part of the state in a general reforestation program.

5. In 1923 the legislature provided for the establishment of the present State Forest Board, composed of the governor, chairman, the state commissioner of public lands, secretary, the director of conservation and development, the supervisor of forestry, and the dean of the College of Forestry at the University.

The duties of this board were, however, limited to a policy covering the establishment of state forests and the acquisition of logged-off lands suitable of forest growing purposes and their management on a sustained yield basis. For acquisition purposes \$200,000 in public utility bonds were authorized, bearing interest not to exceed 3½ percent. Not more than \$2.00 per acre can be paid as the purchase price. In 1931 the administration of the Yield Tax was added to its duties (See No. 7 below).

*State Forest Laws, 1934 Edition.

To date the board has purchased 52,832 acres, ranging in price from fifty cents per acre to \$1.25, and at interest rates from ½ percent to 3 percent.

Practically all of the lands bought were fairly well stocked with young growth, the trees ranging up to fifteen years old. A special Forest Development Fund was also established under this law.

6. In the laws of 1927 provision was also made for the counties to turn over to the State Forest Board any lands acquired through tax delinquency, the lands to be held in trust and managed for the benefit of the counties, the state to reimburse itself for the most of maintenance and administration from any income derived from these lands, the remainder to be turned over to the counties.

7. In 1931, a special yield tax was enacted, providing for the assessment of logged-off lands chiefly useful for growing forests, at \$1.00 per acre west of the summit of the Cascades and 50 cents per acre east thereof. Out of 150 applications requesting the listing of 250,000 classified acres, it has been possible to examine and list only 185,250 because there was no appropriation for carrying out the provisions of the act.

STATE FORESTS

To date the state land commissioner has set aside tentatively 40,727 acres of state lands as state forests, and has purchased in addition 52,832 acres of logged-off lands adjacent to these forests.

ADMINISTRATION

At present the affairs of forest administration are carried out under three distinct divisions of state government.

1. The Department of Conservation and Development, embodying the Division of Forestry.

2. The Forest Board.

3. The Commissioner of Public Lands.

Although the three agencies have through the State Forest Board cooperated most satisfactorily, the system provides for divided authority, particularly with reference to the administrative powers over the state forests. It must be recognized that this is a set-up that with a different group of administrative officers might easily lead to misunderstandings that would cause them to work at cross purposes and against the best interests of the state. A consolidation of the administration of these forests under one head would insure a more unified policy as well as a more economical administration.

FOREST PRODUCTS

It must be emphasized at the outset that the profitable use of our timber resources through the manufacture and sale of forest products is basic to any plan of forest conservation. The cost of growing timber can only be met by a plan for forest development, and lumber is still the major and hence the most valuable product of this state.

Everyone knows that the lumber industry is in a bad way, but the real causes are not generally appreciated by the public. The depression in this industry began before 1929. A steady decline in demand, due largely to the inroads of substitutes for lumber, and over-production presaged a depression for the state of Washington long before any one realized the possibility of a general economic collapse.

New products, in most cases inferior

to lumber, but merchandized by modern methods, backed by scientific data, began to crowd lumber from the field. In most cases the manufacturers of these products made no direct comparisons with lumber, and when such comparisons were made, the scanty data dealing with lumber could not be used to refute the arguments of the substitute manufacturers. The lumberman had available only the so-called "practical" experience observations to offer.

As just one typical illustration the following may be of interest. Every manufacturer of so-called "insulating material" designed to replace lumber has exact data showing the effectiveness of the material in wall construction in preventing heat losses. Not a single test in walls for dwellings constructed by improved methods has ever been made. As a result the substitute materials invariably made in other regions get the business.

Very few improved methods of using lumber have been developed in this country as have been done in European countries.

Many commodities are manufactured in other regions from the raw material of Pacific Coast species, which if manufactured here would result in an increased use of high-class labor and more stable markets.

We have done very little, almost nothing, to improve the quality of our lumber through proper treatment such as making it more fire resistant and preventing expansion and contraction due to changes in moisture content. Due to a lack of research we have lost the market for our material. The demand for wood has fallen off at a tremendous rate.

The box shook, furniture, cooperage, pole and piling demands as well as the demands for many other products, have decreased. The present depressed condition in these industries is not entirely due to the general depression; but is in large part due to lack of technical information upon which to base improvements and to increase sales.

Two wood-using industries in which the demand has increased are the plywood industry and the wood-pulp industry. The former is not growing at a rate commensurate with its possibilities, because of the lack of scientific tests. The latter in its use of hemlock and spruce, has grown rapidly during the past decade, but the absence of an economical method of pulping Douglas fir is a tremendous loss to the state. If our Douglas fir were made available at costs similar to pulping spruce and hemlock, the amount of waste from the mills could be used to replace the entire importation of chemical pulp into the United States.

There are, of course, many potential forest products industries that may be developed in this region, as economic conditions improve. In any plan seeking to save our greatest industry with the large percentage of the wage earners dependent upon it, and looking toward the best economic use of our large forest land area, the development of markets for the products of our forests, is basically essential. This can only be done through a program of research in forest products, with liberal financial support by both public and private agencies.

RESEARCH*

The only existing station in the Northwest devoted solely to forest research is the Pacific Northwest Forest Experiment Station at Portland, Oregon. This is a federal station under the United States Forest Service. We are indebted to the work of this station for practically all of the information now available for use in the solution of our problems in forest management.

The United States Bureau of Entomology maintains a field station devoted to a study of forest insects and their control, the Bureau of Plant Industry maintains in Portland an office to study the diseases of forest trees and the decay of wood, and the Weather Bureau does a certain amount of meteorological research for the cause of fire protection.

The only agency in the country carrying on extended research in wood utilization is the Federal Forest Products Laboratory at Madison, Wisconsin, and the trend is toward the concentration of all such work at this laboratory.

*Report by Director, Pacific Northwest Forest Experiment Station.

COMMUNITY, SOCIAL AND INDUSTRIAL RELATIONS

One of the most unfortunate conditions in any commonwealth is Instability of Communities and Industries. The present timber land situation resulting from our past policy toward our forest resources and the falling off of the demand for forest products has resulted in a serious situation in Washington and unless a comprehensive plan for land use embodying sustained yield forest management and one for the stabilization of the lumber industry is put into effect this condition in Washington will rapidly grow worse.

Under such a plan, the forest land areas will become, in effect, factories which annually produce sufficient raw material to sustain industries geared to the amount of the annual growing wood supply. In this way lumber employment will not be the shifting thing it is today, but will be as stable as the productive capacity of the land itself. Forest land productivity is indissolubly bound up with the tax problem. The well-being of government depends upon the tax rolls. Government, no less than industry, must have an annual income. Industry to be stable must also be able to live; to operate in such a manner that it is able to look ahead and plan for its continued existence, and in so doing, create employment which will produce for capital and labor a fair return. Only by so doing can any industry be stabilized, and we therefore have, as a major objective in our problem, the necessity for stabilizing the foundation upon which community stability must rest, that is, the continuous productivity for forest land.

The maintenance of a happy, contented people is above all else dependent on sustained employment plus the best use of the unemployed time which a necessary seasonal occupation provides. Certain phases of the forest industries are seasonal.

Adjacent to all forest areas there are areas of good agriculture land favorably situated from the standpoint of economic land use. Under a sustained yield plan of forest management and a stabilized lumber industry a plan can

PACIFIC PULP & PAPER INDUSTRY

be developed whereby the time of seasonal workers may be definitely allocated to work in the woods and in the production of food crop for home use, such as garden produce, milk, eggs, poultry, etc.

It will mean the development of true woodsmen, men who are independent in their attitude towards life, men who have families to cling to, who have an interest in developing the system whereby they enjoy a good livelihood; men who can see from the development of such a plan that they can raise a family with the knowledge that they are secure in their employment, so long as they give as fair a share of labor as they, in their turn, receive in wages and good treatment from industry.

PUBLIC RESPONSIBILITIES CONCERNING STATE FOREST LAND

It is a well recognized fact that a continuous supply of forest products is essential if the social and economic life of the state at large is to be permanently continued. The original stands of timber are rapidly being depleted and cannot be permanently depended upon as a sound source of supply for forest products. Only by handling all of the forest lands in the state on a continuous cutting or sustained yield basis can the essential supply of forest products be assured.

The responsibility of the public in connection with affairs related to the forest lands of the state can be redeemed only by public opinion developed on the basis of the facts of the

present situation and desirable changes. Analysis of forest problems, the demands of the present situation, the sources of supply, the rates of depletion, and the changes required to place industries dependent upon a satisfactory timber supply on a permanent basis should be ascertained and developed by public agencies. Information of this character should be made available through all of the various channels of publicity to the end that the people of the state may be fully advised as to the pattern of the problems related to and dependent upon the forested area of the state.

Considered from every angle it is desirable that private initiative and ownership occupy a major place in the production of forest products on a long term basis. It is a public responsibility to establish and maintain economic and other conditions through state or federal legislation and policy which will encourage continuous sustained yield management on the maximum acreage of forest land now privately owned. The direct and indirect benefits derived by the public from a continuous supply of forest products are so important that public aid is amply justified. Since the public benefits can be secured to the highest degree only when lands are handled on a sustained yield basis, it would appear reasonably to extend special benefits or privileges only to forest lands managed on a sustained yield basis.

Public responsibilities can be made effective and carried out only by the formulation of an aggressive state forest policy handled by the State Forest Department covering such matters as

cooperative protection of forest lands, management of private lands on a sustained yield basis, acquisition and management on all state forest lands. It is probable that the combined efforts of private owners and state will be inadequate to carry the burden of sustained yield management of all of the existing state and private timbered lands on a sustained yield basis. If this proves to be the case, additional federal acquisition would appear desirable and should be facilitated.

TAXATION

The need for adjustments in the entire tax system of the state is evident to all. Forest taxation is an important part of the system in Washington and the Northwest because of the relatively large forested area. For the immediate future, and until the entire system is reformed, timber must be placed in a special category, and every aid given to standing mature timber now on the land. The social services bound up in timber and timber land are directly related to taxes, and in that field, the need for the greatest advance in taxing technique must be made; i. e., to conserve all the social values for society.

The chief difficulties in the tax situation are land assessment ratios of timber land and other land classes, technical aids to uniform assessments by county assessors and the type of tax best suited, now, to the timber values of the state, e. g., the deferred timber tax vs. the yield tax.*

*The Deferred Timber Tax, Pacific Northwest Forest Experiment Station.

Suggested Plan for the Development of Forestry in Washington

In suggesting a definite plan for Forest Development your Committee believes:

1. That it is acting in accordance with the purposes of the Planning Council;
2. That it is the only method for an intelligent approach to an orderly and economical solution of the forestry problems of the state; and
3. A well developed plan directed toward the accomplishment of certain definite objectives will undoubtedly arouse sufficient interest to get some results.

Many of the objectives cannot be attained in a few years time, others that will require much more time to complete can be initiated and put into operation gradually during the next four to six years.

The plan presented should not be looked upon as a completed piece of work. The salient features should be

adopted with the expectation that the details will need to be modified as the plan is put into operation and as experience dictates.

The total expenditures recommended are small—very small indeed—when it is remembered that:

1. The plan embraces a policy for making the best use of over one-third of the land area of the state;
2. It covers a policy for the continuity on a sound basis of the largest industry of the state and the stabilization of communities;
3. The forests, because of their relation to water conservation, flood control, erosion, irrigation, navigation, water-power, wild life, recreation, and the scenic resources, have an important bearing on practically all plans for the conservation and orderly development of the resources of the state with which the Planning Council is charged by the Governor and the Legislature.

A. Adopt policy in reference to State-owned Forest Lands.

I. Establish State Forests.

- a. Set aside all state-owned forest lands as State Forests which in the judgment of the Board are suitable for that purpose. Object: Bring these lands under system of continuous production as soon as possible. Required—Legislation giving Forest Board full powers to establish same by proclamation.

Time required, 4 months. No special cost.

- b. Acquire additional lands.

Object: Unless abandoned lands are managed by the State or Federal Government they will rapidly deteriorate.

1. Zone the forest land areas of the State as follows:

PACIFIC PULP & PAPER INDUSTRY

23

- a. Areas best adapted for State or for Federal acquisition.
Requires joint study U. S. Forest Service and State.
Time, 3 months. No special cost.
- 2. Increase amount of Public Utility Bonds as follows:
1935-37 total of \$300,000
The land purchased by these bonds to date is more than self-supporting, paying all examination costs and interest on bonds.
- 3. Provide legislation turning all forest lands acquired by counties through tax lien foreclosures over to control of Forest Board, lands to be classified by the Board, and those chiefly valuable for agriculture to be returned to the counties, the forest lands to be held and managed in trust for the counties. State to be reimbursed for cost of administration. Rest of income to go to counties. These lands will not be self-supporting for many years because of long neglect.
Required — Special legislation, 1935 session.
Appropriation 1935 session, \$18,000 for examination of these and lands to be purchased for reforestation purposes.
- 4. Stabilize revenues in counties where public acquisition indicates a necessity.
 - a. Turn over to counties in lieu of taxes certain percent of income from the land.
 - b. Work out tax adjustment as indicated under B. II. d. below—Taxation Research.

II. Administration and Management.

- a. Reorganize State Departments concerned with administration of State-owned forest lands under one head—the State Forest Board including State Forests, forest lands not in State Forests, and State Parks.
 - 1. Increase board to 7 members, adding to present 5 members, Professor of Forestry, State College, and one representative of the West Coast Lumbermen's Association (a technically trained forester).
Object: Forestry practice covers a long period of years and policy must be continuous.
 - 2. Change name of State Supervisor of Forestry to State Forester in conformity with other states and make him secretary of the Board.
 - 3. Change status of Division of Forestry to a Department under administrative control of the Forest Board.

Forestry is so important that it requires such status. Under the

- present administration the arrangement is eminently satisfactory. This has not been the case in the past and will not be so in the future. Requires legislation at 1935 session.
- b. Initiate working plan studies on State Forests immediately.
Requires an additional high class technical man and some assistance. Cost \$6,000 for biennium.
- c. Adopt immediately for use in all State-owned forest lands the provisions of Article X of the Lumber Code and enact into law the principles of this code at 1935 session. No special cost. Memorialize Congress to change enabling act permitting this.
- d. Provide legislation at 1935 session enabling the State to co-operate with Federal authorities and private owners in sustained yield management of contiguous areas. No special cost.
- e. Provide legislation re. trespass by cattle, 1935 session. No special cost.
- f. Provide at 1935 session for taxing mineral rights held in separate ownership from the ownership of the land. No special cost.
- g. Develop a recreation plan for State Forests and provide for co-operation in such plans with Federal Government and private owners in contiguous areas. No legislation required.
- B. Adopt Policy for Meeting the Public Responsibilities of the State, where the economic Welfare of the State indicates a need.
 - 1. With the Department of Agriculture and in cooperation with the United States Forest Service work out definite plan for subsistence homesteads. Plan to be ready for submission at 1937 session of legislature. Cost (?)
- II. In connection with the management of timberlands in private ownership:
 - a. Increase protective facilities against damage from fire, insects, and fungi. Increase biennial appropriation for fire control from \$125,000 to \$180,000. Appropriate \$10,000 for insect and fungi control, one-half of this to be held as an emergency fund.
 - b. Provide for technical assistance and advice to private owners.
 - 1. Extension foresters. Required —2 additional technical men. Cost, salaries and expenses, \$4,500.00 for biennium. Session 1935.
 - 2. Publications. Cost for preparation and printing \$4,000 for biennium 1935.
 - c. Reduce the valuation on so-called "Reforestation Lands" from \$1.00 to 50c per acre on lands west of the Cascades, and from 50c to 25c on lands east thereof.
 - d. Provide for Research and General Studies relating to forest lands.
- 1. Compilation of statistics. Work to be done by extension foresters. No cost.
- 2. Research required for working plan development of State Forests. No cost.
- 3. Taxation (Cooperation, State Tax Commission).
 - a. Research in virgin forest land assessments as to ratios, methodology of county assessors and assessment adjustments to owners of timber lands.
 - b. Research as to the technical aids which may be used in the assessment of timber lands and the forest cover by assessors in the interest of standardized assessment procedure and the greater uniformity in assessments.
 - c. Research in assessment ratios of forest properties as compared with the assessment ratios of the other principal classes of property.
 - d. Research as to the practical details of the application of the deferred timber tax to Washington, e. g., the size of the State Timber Tax Fund, the amount of annual tax deferral, etc.
- III. In connection with the Manufacturing and Merchandizing of Forest Products.
 - a. As soon as finances are available establish Research Laboratory at College of Forestry for the purpose of obtaining scientific data of the value of lumber for specific uses as a service to manufacturer, distributor, and consumer, and the development of new and better uses of all forest products.
The expense to be participated in both by the State, the Federal Government and the industry. A suitable building, much of the equipment, and the nucleus of a technical staff are already provided on the University campus. Detailed plan to be presented at subsequent meeting. Immediate appropriation of \$8,000.00 for research for the biennium.
 - b. Provide for an Educational Program for the Benefit of the General Public.
 - 1. Lectures and attendance at important meeting. Provide \$800.00 for the biennium as expense money.
 - C. Federal Responsibilities.
 - a. Establish a permanent forest credit system.
 - b. Provide full allocation of Clark-McNary funds for protection.
 - c. Full allocation of funds authorized by the McSweeny-McNary Act for research.
 - d. Acquire lands within areas classed as Federal zones.
 - D. Planning Council to work through Regional Council to adjust policies of mutual interest for States of the Northwest Region.

PACIFIC PULP & PAPER INDUSTRY

ORGANIZATION OF TECHNICAL ADVISORY COMMITTEE ON FORESTRY OF THE WASHINGTON PLANNING COUNCIL

The committee appointed to cover the nine major divisions of the field of forestry follow, the first named is chairman. Never before have so many men in so many walks of life interested themselves in formulating a forestry program for the state of Washington.

1. Forest Management

C. S. Chapman, Forester Weyerhaeuser Timber Co., Tacoma. Member Douglas Fir Lumber Code Committee.
 E. T. Clark—Manager Monroe Logging Co., Everett.
 Bruce Hoffman—U. S. Forest Service, Portland, Ore.
 W. H. Meyer—U. S. Forest Service, Portland, Ore.
 A. C. Martin—Commissioner Public Lands, Olympia.
 Judge E. H. Loomis—Aberdeen, Wn.
 Newell Wright—Regional Code Supervisor, Article X Lumber Code, Portland, Oregon.
 Russell Mills—Field Supervisor, Article X Lumber Code, Seattle, Wn.

2. Forest Protection (Fire, Insects and Fungi)

C. S. Cowan—Chief Warden Washington Forest Fire Association, Seattle, Wash.
 T. S. Goodyear—Supervisor of Forestry, Olympia.
 E. H. MacDaniels—Inspector State Co-operation in Fire Control, Portland, Ore.
 F. P. Keen—Entomologist, U. S. Forest Service, Portland, Ore.
 C. B. Sanderson—Milwaukee Land Co., Seattle.
 Stephen Wykoff—In charge Blister Rust Control, Spokane.
 W. M. Leuthold—Deer Park Lumber Co., Deer Park.

3. Forest Products

B. L. Grondal, University Washington College of Forestry, Seattle.
 C. H. Kreienbaum, Sales Manager, Reed Mill Co., Shelton.
 E. S. Harrar—University Washington College of Forestry, Seattle.
 Chester Hogue—Engineer, West Coast Lumbermen's Association, Seattle.

George Gunn—Puget Sound Pulp & Timber Co. (American Warehouse Co., 95 Connecticut St., Seattle).

E. H. Denman—Olympia Forest Products Co., White-Henry-Stuart Building, Seattle.

W. E. Crosby—Editor, West Coast Lumberman, Seattle.

Al Hodgson—U. S. Forest Service, Portland, Ore.

4. State Forest Policy

T. S. Goodyear—Supervisor of Forestry, Olympia, Wash.
 E. J. Fenby—Asst. Supervisor Snoqualmie National Forest, Seattle.
 C. W. Saunders—Architect, Seattle.
 J. L. Bridge—Sound Timber Co., Seattle.
 Ben Colwell—Cascade Lumber Co., Yakima.
 Frank Reed—Simpson Logging Co., Seattle.
 Norman Jacobson—Forester, St. Paul & Tacoma Lumber Co., Tacoma.
 Dan Coffman—Banker, Chehalis.
 W. C. Mumaw—Special Industries Committee, Grays Harbor, Aberdeen.

5. Watersheds and Erosion

John C. Kuhns—U. S. Forest Service, Seattle.
 E. H. Steffen—Forestry Department, Washington State College, Pullman.
 T. S. Goodyear—Supervisor of Forestry, Olympia.
 Allen Thompson—Forester, Cedar River Watershed, Cedar Falls.
 E. N. Kavanaugh—U. S. Forest Service, Portland, Ore.
 Dr. C. J. Lynch—Yakima Conservation League, Yakima.

6. Community Social and Industrial Relations

Harry K. Lear—University State Bank, Seattle.
 D. S. Jeffers—University of Washington College of Forestry, Seattle.
 George Drake—Simpson Logging Co., Shelton.
 R. D. Lytle—Attorney, Tacoma.
 W. G. Weigle—Superintendent State Parks, Seattle.
 W. H. Mathias—Hoquiam-Aberdeen Chambers of Commerce, Aberdeen.

7. Wild Life

Don Johnson—Seattle Tea & Coffee Co., Seattle.

Sam Geijsbeck—Izaak Walton League, Kent.

Waldo Dahl—Seattle Rod and Gun Club, Seattle.

Edward P. Cliff—U. S. Forest Service, Portland, Ore.

Leo Couch—Biological Survey, Olympia.

Mr. Bennington—State Game Commission, Walla Walla.

8. Research

Hugo Winkenwerder—University of Washington College of Forestry, Seattle.

J. B. Fitzgerald, West Coast Lumbermen's Association, Seattle.

T. S. Goodyear—Supervisor of Forestry, Olympia.

E. C. Johnson—Washington State College, Pullman.

T. T. Munger—U. S. Forest Experiment Station, Portland, Ore.

C. S. Cowan—Washington Forest Fire Association, Seattle.

9. Public Responsibilities (Legislation and Taxation)

D. S. Jeffers—University of Washington College of Forestry, Seattle.

C. S. Chapman—Weyerhaeuser Timber Co., Tacoma.

F. H. Brundage—U. S. Forest Service, Portland, Ore.

Tom Holman—Attorney, Seattle.

Howard Hanson—Attorney, Seattle.

James K. Hall—Department of Political Science, University of Washington, Seattle.

L. T. Murray, West Fork Logging Co., Tacoma.

Each committee was divided into a number of sections which undertook certain special studies. The section reports were then submitted to the committee as a whole for criticism and suggestion. The reports were then presented for further discussion at the thirteenth annual meeting of the Washington State Forestry Conference, held at the Seattle Chamber of Commerce, November 23, 1934. Some members of the Planning Council and the Technical Advisory committees participated in this meeting.

The report submitted herewith represents a correlated summary of the reports of the various committees and is presented in two parts:

- A. The Facts Pertaining to the Forest Resources of Washington, and
- B. A Plan for the Conservation and Development of the Forest Resources.



RAINIER GIVES POPULAR COURSE IN RAYON PULP MAKING

Possessing a desire to keep up with the rapid advances being made in the pulp and paper industry, approximately one hundred and twenty-five members of the Rainier Pulp & Paper Company's organization attended the first session January 3rd, of the company's institute on rayon pulp making.

David B. Davies, general manager of Rainier, conceived the course of instruction over a year ago. It consists mainly of a series of lectures covering a wide range of subjects dealing with the manufacture of rayon pulp, with department heads and specialists in the various divisions of the plant conducting the lectures.

On account of the large number taking advantage of the course, two groups are to meet each Thursday evening, the first group convening at 5:30 and the second at 8:30 p.m. Text books relating to the subjects of the lectures and also for reference purposes have all been prepared and represent the work of a large number of executives and specialists engaged in the manufacture of pulp in the Pacific Northwest.

At the first session held at the Junior High School in Shelton, January 3rd, the following statement from Mr. Davies was read to the class:

"The purpose of these lectures is to give any employee of the Rainier Pulp & Paper Company an opportunity to get a better understanding of the sulphite process and our manufacturing processes in general. The school is being organized for the benefit of practical mill operators, and it is our hope that the lectures will give each and everyone of the mill operators a clearer idea of the working of his own job and the other fellow's job.

"Since the school is for the benefit of practical pulp makers, it is advisable that we avoid technical discussions and confine ourselves to those things of interest to practical mill operators. I am sure that if we follow the course along these lines we will all receive some benefit from these instructions and discussions."

Following is the schedule of the course in sulphite pulp making at Shelton through and including March 14th:

Date.	Subject.	Lecturers
Jan. 3, 1935	Physical & Chemical Properties of Wood-Chips and Wood Room Practice	O. W. Greenwalt A. S. Viger
Jan. 10, 1935	Acid Plant and Digesters	O. W. Greenwalt A. S. Viger
Jan. 17, 1935	Group Discussion of Acid Making and Cooking	O. W. Greenwalt A. S. Viger
Jan. 24, 1935	Blowpits—Screening—Decker—Refilling	M. C. Kaphingst
Jan. 31, 1935	Bleach Plant	M. C. Kaphingst O. W. Greenwalt
Feb. 7, 1935	Machine Drying	W. R. Gibson P. G. Anderson
Feb. 14, 1935	Finishing and Handling of Raw Materials	R. E. Brown Hal Briggs V. Morgan Ernest Dahlgren
Feb. 21, 1935	Maintenance	Leonard Walton Gurdon Foy J. R. Kiely W. R. Gibson
Feb. 28, 1935	Rayon—Cellophane	Dr. R. M. Pickens Dr. R. E. Brown
March 7, 1935	Cleanliness—Safety	Robert Williams Ferdinand Schmitz
March 14, 1935	Management Relations	D. B. Davies Ferdinand Schmitz

The following men are enrolled in the Sulphite Pulp Study course: Clarence Goun, John McReavy, J. W. Bennett, Alva E. Cole, A. W. Wright, Ralph Wagner, Ted Daniels, Kernie Collins, Norman L. Morgan, Pat Meurer, Myron Lund, Robert Evans, Cab Rains, R. C. Stoy, A. O. Biehl, C. F. Murray, M. Lumsden, Courtney Pauley, M. M. Henley, W. F. McCann, Chesley Pringle, Denis Berdine, M. H. Needham, Berna Evans, Chas. A. Siebel, Clarence Morgan, Ed Miller, Dave Getty, Virgil Morgan, Andy Harris, Everett Jacobs.

Gerard C. Eck, Ed Johnson, John Kollen, Irving Angove, Geo. E. Durkee, Eugene Browning, R. N. Pollock, M. E. Kinsey, Geo. Cardinal, Alvin Peterson, Ralph Wyatt, L. O. Seljestad, Fred Roberts, Clarence Weston, Orval Haight, L. M. Martin, W. W. Flint, Carl Emsley, Kenneth C. Calkins, Clarence J. Sowers, Robert F. Bampton, Walter Sivo, Howard K. Plumb, Joe Viger, A. J. Ferguson, A. S. Viger, Gurdon Foy, Dave Greenwalt, Bob Condon, M. Kaphingst, Axel Peterson.

Theodore Deer, J. C. Roush Jr., Earl Johnson, Marvin Morgan, Albert Van Overbeke, Franklin Pierce, R. H. Williams, C. W. Murray, R. E. Getty, E. P. Fourre, Leonard Atwood, Chas. DeMoss, Wm. J. Brown, Charles Lee, C. L. Walton, D. C. Wilson, John McKinney, Henry Stevenson, W. C. Moore, A. M. Packard, H. D. Briggs, B. L. Boyle, Oliver Ashford, Ed Aardal, Ernie Jones, Raymond Collins, Ronald Hulbert, Jim Amunda, B. E. Sullivan, Adam Korbas, Winston Scott.

J. F. Brokaw, Bernard Winiecki, Walter Kullrich, William Gibson, John Walton, Ernest Dahlgren, Martin Smith, Kenneth Fosse, Quinton Peniston, George Young, Len Walton, John Kiely, Ted Monson, Robert Bell, Harold Hough, Fred Pestl, William Savage, A. L. Cheaney, H. A. Sullivan, George Cooper Jr., Kirk Jordon, Elgie Davis, Axel Hendrickson, John Smith, William Getty, Ernie Crane, Charles Walton, Robert H. Allan, William Baihly, B. J. Brown, Vivian Morgan, James Stout.

The work of conducting the classes has been greatly simplified through the splendid cooperation of the School Board and Professor H. E. Loop in allowing the free use of the Junior High School building and its equipment.

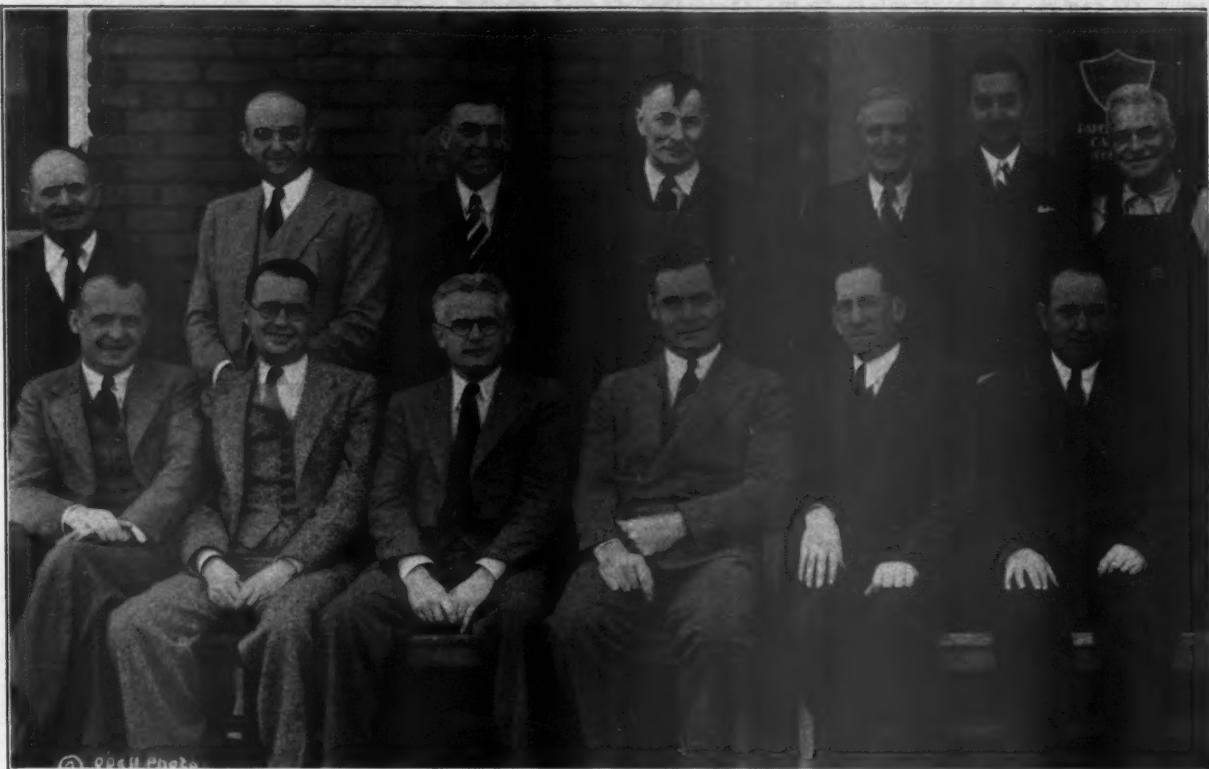
SALMONSON LEAVES CAMAS

Sam A. Salmonson resigned as sulphite superintendent of the Camas mill of the Crown-Willamette Paper Company early in January. Mr. Salmonson is making his home at Portland.

OLSON MOVES TO CAMAS

Andy Olson has been transferred from the Lebanon, Oregon, mill of the Crown-Willamette Paper Company to the Camas, Washington, mill where he is serving as assistant to Jack Hanny, mill manager.

Dan Dupuis continues to act as general superintendent of the Lebanon mill of Crown-Willamette and in addition is handling the work formerly done by Andy Olson.



GROUP PHOTOGRAPH OF THE MANAGEMENT AND DEPARTMENT HEADS OF VERNON PLANT

Reading from left to right on this page, back row: James Brigden, Yard Foreman; W. F. Graham, Assistant Sales Manager; Oakey Jones, Cutting Foreman; Frank Loth, Converting Mechanical Foreman; Tom Barnes, Sample and Sales Display; F. H. Wheelock, Chemist; and S. I. Wasell, Chief Engineer. Front row on this page, left to right: A. J. Smith, Purchasing Agent; R. K. Walters, Estimator; George F. Ford, Converting Plant Manager; O. C. Major, Sales Manager; Murray G. Brown, Master Mechanic; Bruce F. Brown, Manager Southern District.

CANADIAN NEWS OUTPUT INCREASE 28.9%— U. S. INCREASE 1.1% IN 1934

Canadian and Newfoundland newsprint mills obtained nearly all the benefit from the increased use of newsprint in the United States during 1934, according to the figures just released by the Newsprint Service Bureau.

The total North American output of newsprint paper in 1934, according to the Newsprint Service Bureau, was 3,892,887 tons, of which 2,599,292 tons was made in Canada, 957,196 tons in the United States, 316,119 tons in Newfoundland and 20,280 tons in Mexico. The Canadian output was 28.9 per cent more than in 1933, that in the United States 1.1 per cent more, with a gain of 16.7 per cent in Newfoundland and a 23.9 per cent gain in Mexico, making a total continental

increase of 642,570 tons, or 19.8 per cent. Reports from United States mills for earlier years included a small amount of poster, novel and similar paper, but the 1934 figures are confined strictly to newsprint.

Production in Canada during December, 1934, amounted to 239,544 tons and shipments to 254,657 tons. Production in the United States was 79,777 tons and shipments 86,363 tons, making a total United States and Canadian newsprint production of 319,321 tons and shipments of 341,020 tons. During December, 24,394 tons of newsprint were made in Newfoundland and 1,820 tons in Mexico, so that the total North American production for the month amounted to 345,535 tons.

Stocks of newsprint paper at Canadian mills are reported at 30,366 tons at the end of December and at United States mills 12,428 tons, making a combined total of 42,794 tons compared with 58,261 tons on December 31, 1933.

HOWARD MAY MAKE SECOND SURVEY OF KALAMA

George N. Campbell, banker of Kalama, Washington, told the Kalama Business Men's Club on January 8th that the Howard Paper Company will soon send engineers West to make a second survey of Kalama as a possible site for a pulp and paper mill.

DeMARAI'S MOVES OFFICE

H. A. DeMarais, Northwest representative of the General Dye-stuffs Corporation recently moved his office to 329 Terminal Sales Building, Portland, Oregon. Mr. DeMarais is secretary-treasurer of the Pacific Coast Division of the American Pulp & Paper Superintendent's Association.



NO. 3, FIBREBOARD PRODUCTS, INC., LOS ANGELES, CALIFORNIA—DECEMBER, 5, 1934

Reading from left to right on this page, back row: Boyd R. Lewis, Sales Promotion; William P. Streb, Printing Foreman; Willis Martin, Mill Finishing Foreman; Walter Doran, Converting Finishing Foreman; H. L. Miller, Office Manager; and U. Grant Farmer, Board Machine Foreman. Front row on this page, left to right: Harvey M. Brown, Plant Manager; R. M. Cotner, Credit Manager; John Mulsoff, Fibre Foreman; B. J. Flynn, Warehouse and Shipping Foreman; George J. Stoltz, Folding Box Superintendent; and R. P. Almour, Personnel Manager.

JOINS RESEARCH ORGANIZATION

Dr. Mark Plunguian, who graduated from the Idaho Forestry School with the degree M. S. (For.) in 1931, has accepted the position of research chemist with the Thomas and Hochwalt Laboratories of Dayton, Ohio. This concern is a large commercial research laboratory. Dr. Plunguian will be in charge of research work on lignin and paper chemistry.

Dr. Plunguian was the first graduate student in the Idaho School of Forestry's newly established wood chemistry laboratory under the direction of Dr. E. C. Jahn. After leaving Idaho, Plunguian worked for a year as chemist for the Potlatch lumber Co. at Potlatch and then went to McGill University, where he received his doctorate in chemistry this past October. At McGill, Dr. Plunguian worked on the chemistry of lignin and humic acids under the direction of Dr. Harold Hibbert. Dr. Plunguian

presented the results of his studies there at the September meeting of the American Chemical Society in Cleveland.

PORT ANGELES PAPER MAKERS ELECT OFFICERS

John Reiners is the new president of the Port Angeles local of the International Brotherhood of Paper Makers. Ira Bourm is the new vice-president. George Johnson was re-elected financial secretary; Percy Pollanz, recording secretary, and Paul Neer, treasurer. The new trustees are Harry Fowler, William Faulkner and Albert Brown. The local has about 140 members.

DRUMB VISITS STATES

Frank A. Drumb, mill manager of Pacific Mills, Limited, Ocean Falls, B. C., recently spent some time in Portland conferring with officials of the Crown-Willamette Paper Company.

FIBREBOARD'S ANTIOCH PLANT BUYS NEW EQUIPMENT

Toward the end of 1934 the Antioch, California, plant of Fibreboard Products, Incorporated, completed several improvements.

A new Nash L-6 vacuum was installed on the No. 1 machine. The wet end of No. 3 machine was revamped to increase production and to improve the quality of the corrugating straw. The vats were added to and a new suction press was installed.

A new milling machine and a new lathe were added to the machine shop equipment.

R. B. WOLF RETURNS TO COAST

Mr. Robert B. Wolf, manager, Pulp Division, Weyerhaeuser Timber Company, Longview, Washington, returned to Longview December 23rd after an extended trip in the East and Middle West.

T·R·A·D·E · T·A·L·K

of those who sell paper in the western states

+++

PAPER DISTRIBUTION CODE SHOWS TEETH

A court action of vital interest and importance to all paper distributors took place last month in Los Angeles when a local paper concern was found guilty of code violation and its owners given a jail sentence for the infraction.

The case has put real teeth in the paper distributing code, and has shown all concerned that enforcement of its provisions is more than mere conversation. The effect will be far reaching.

On Dec. 19, Sidney Calof and Ernie Calof of the Badger Paper Co., Los Angeles, pleaded guilty before Municipal Judge Scoot to having violated the Code of Fair Competition for the Paper Distributing Trade, by giving a cash rebate to a customer on a sale of butcher paper. The court imposed a 30-day jail sentence on both of the defendants but suspended commencement of sentence for six months on the understanding that future wilful violation of the code would constitute contempt of court and would result in the defendants being required to serve the sentence.

This is the first case of actual prosecution for violation of the code in the courts of any state in the Pacific States region, and in effect upholds the legality of the code and its enforcement. It paves the way toward further prosecutions if, when and as needed, and gives enforcement agencies a powerful persuader with recalcitrant paper distributors. The case has been pending for some time, and has been regarded as of great importance to all paper people on the Pacific Coast.

Paper merchants in Southern California feel that the decision has immeasurably strengthened compliance under the code and has already resulted in a cleaner market. It is

believed that inequities that formerly existed because complying jobbers were injured by the non-compliance of others, will now be removed, and that the result will be uniform compliance, putting all distributors on an equal competitive basis under code provisions.

LOS ANGELES PERSONALS

Nancy Baker Tompkins, Los Angeles paper adviser, returned to Los Angeles just before Christmas after a trip into Utah. During the past year he has traveled quite extensively, and last summer made a trip to Australia, establishing agencies there for the Hammermill Paper Co. and the Appleton Coated Paper Co.

Ed N. Smith, representative of the Tuttle Paper Co., returned a short time ago from a business trip to the mill at Appleton, Wis.

E. S. Colvin, sales manager of the Appleton Coated Paper Co., Appleton, Wis., is due to arrive on the Coast about Feb. 1, for his annual trip covering the entire Coast.

Victor Hecht of the Zellerbach Paper Co. visited the Los Angeles division recently on one of his periodic inspection trips. Mr. Hecht is now stationed at San Francisco, but formerly was general sales manager at Los Angeles.

W. B. Reynolds, secretary of the Southern California Trading Area Sub-Committee for the paper distributing code, Los Angeles, spent Christmas week in San Francisco enjoying a reunion with relatives. While there he visited the Bay city regional code offices.

PAPER TRADE CONVENTION

The annual convention of the Pacific States Paper Trade Association will be held May 9th-11th at the Hotel Del Monte, Del Monte, Calif.

W. H. Ballantine has been promoted to head the fine paper department of the Ingram Paper Co., Los Angeles, effective Jan. 1. He has been on the Ingram staff for a number of years, and came to them from the Grimes-Stassford Stationery Co., Los Angeles.

Roy A. Swain of the L. L. Brown Paper Co. left Los Angeles Jan. 8 for a trip through the northern territory. S. R. Whiting, California representative of the Inland Empire Co., left at the same time for his usual monthly sojourn in San Francisco.

Los Angeles paper distributors are planning a dinner get-together to take place during January.

K. C. Holland of the Carpenter Paper Co., Los Angeles, spent the Christmas holidays in San Francisco.

A. B. Moody of the Everett Pulp & Paper Co., Everett, Wash., passed through Los Angeles Dec. 28 en route to Phoenix, Ariz. After a short stay there he returned again the middle of January, on his way back to his Everett office.

A. A. Ernst, Los Angeles representative of the Everett Pulp & Paper Co., spent Christmas week in San Francisco, combining his holiday with business visits around the trade with Jack Pope.

A. H. Voss has joined the sales staff of the Sierra Paper Co., Los Angeles, coming from the McClellan Paper Co. of Minneapolis, which is also a branch of the Butler Paper Co., St. Louis.

ASK TERMINATION OF GOVERNMENT DISCOUNTS

At its meeting December 14, 1934, the Paper Industry Authority approved and adopted the following resolution asking President Roosevelt to terminate as far as the paper industry is concerned, the executive order of June 29, 1934, permitting bidders for federal, state or municipal business to quote prices as much as 15% below filed code prices.

Copies of the resolution were sent to S. Clay Williams, chairman of the National Industrial Recovery Board and to the Paper Distributing Trade Authority.

Whereas, by Executive Order 6767, dated June 29, 1934, it was ordered that bids to agencies or instrumentalities of the United States or any State or Municipality by members of Industries in which Codes of Fair Competition require the filing of prices, might be made at a price not more than 15 percent below the price filed by the bidder pursuant to the provisions of said Code, and

Whereas, the Paper and Pulp Industry is duly organized and functioning under a Code of Fair Competition duly approved, pursuant to the National Industrial Recovery Act, and

Whereas, the members of said Industry sell a substantial amount of paper and paper products to the United States and to States and Municipalities, and

Whereas, the Paper Industry Authority, the duly constituted agency for the administration of said Code, believes that the filing of price schedules pursuant to the terms of said Code is a desirable and necessary means of effectuating the object and policy of the National Industrial Recovery Act, and

Whereas, it has developed that by the aforesaid Executive Order, Federal, State and Municipal Agencies and Instrumentalities are placed in a favored and preferred position as opposed to business and industry generally and are thereby enabled to encourage destructive price cutting and unfair competition, and

Whereas, the said Paper Industry Authority believes that it is the policy of the National Industrial Recovery Act that uneconomic and destructive price cutting is not in the public interest, and

Whereas, there is no sound economic distinction to be made between purchases by Federal, State and Municipal Agencies and Instrumentalities, and those made by private business, and

Whereas, the said Executive Order has tended to cause and has caused demoralization in many markets for paper and paper products thereby endangering the maintenance of the provisions of said Code, especially the provisions relating to maximum hours and minimum wages, and

Whereas, reductions of the said 15 per cent tolerance even though made promptly, would not give adequate relief from the serious uneconomic disturbances in Industry caused by said Executive Order;

Therefore, be it resolved, that the President of the United States be requested to forthwith terminate the effectiveness of said Executive Order with respect to the Paper and Pulp Industry.

December 27, 1934.

COARSE PAPER REPRESENTATIVES MEET

Coarse paper mill representatives in Southern California plan to meet January 25 at the Los Angeles Athletic Club for a sociable evening and to discuss mutual problems. Dinner will be in the Green Room at 7 p. m.

It is hoped that this will be but the first of a series of similar meetings of the group, and that out of it may grow an informal organization of business and fraternal value.

Leaders in the plan are Frank Philbrook of the Graham Paper Co., G. D. Megel of the Hawley Pulp & Paper Co. and Ed N. Smith, representing the Tuttle Paper Co. and others.

SIERRA MARKETS NEW STATIONERY

"Tahoe," a new line of fine boxed stationery, is being introduced in Southern California by the Sierra Paper Co., Los Angeles. It is being converted, boxed and labeled in the Sierra plant, a new activity for the company. Manufactured in Los Angeles, it is finding a ready market among California stationers, department stores, etc., for counter sale.

EVERETT ANNOUNCES TWINPHASE BOOK

In an attractive broadside the Everett Pulp & Paper Company of Everett, Washington, recently announced a new tub-sized versatile paper adapted to either letterpress or offset printing, to be known as Everett Twinphase Book. The broadside was printed by both the letterpress method and the offset method, the same photographs being used to permit comparison. The new book paper will be sold by all the regular distributors of Everett papers.

BRINKER TO HANDLE SORG LINE

N. L. Brinker, Los Angeles mill representative, reached home from the East recently, bringing with him a new line—that of the Sorg Paper Co., Middletown, Ohio. The company manufactures cardboard, bristol board, sulphite bonds, offset papers, and 75 or more specialties.

While traveling, Mr. Brinker visited a number of mid-western mills and observed a noticeable improvement in conditions generally.

On Dec. 1 the offices of Towelsaver, Inc., with whom Mr. Brinker has his quarters, moved to a new location at 943 No. Main St., Los Angeles. They formerly were at 1003 No. Main St.

KEHRES PROMOTED

John Kehres has recently been appointed Wrapping Paper Department manager for the Zellerbach Paper Co. in their Los Angeles division. Mr. Kehres has been with the company for many years and formerly was assistant manager of the same department.

PACIFIC WAXED PAPER SUFFERS FIRE

Fire of incendiary origin recently damaged stock in the plant of the Pacific Waxed Paper Company of Seattle to the extent of \$500. The incendiary left a note threatening to burn the plant down next time.

INDUSTRY AIDS INSTITUTE OF PAPER CHEMISTRY

The budget of the Paper Industry Authority for the first six months of 1935, submitted to the Board of Governors on January 17th included \$12,000 "to continue the study of instrumentation at the Institute of Paper Chemistry."

NOW! Prompt instrument service *when you want it*



Whenever your Bristol's Recorders require cleaning, recalibration, modernizing, or other attention, you want the work done promptly. You cannot afford to keep instrument equipment idle too long.

It is for this reason that we maintain complete servicing facilities at our San Francisco Factory. Here you will find machinery and instrument testing apparatus under the supervision of skilled and experienced personnel prepared to take care of your needs promptly.

Recorders to be re-modeled should be carefully packed and forwarded direct to The Bristol Company, 311 Minna Street, San Francisco. Also mail shipping notice and order authorizing work.

THE BRISTOL COMPANY
Rialto Bldg., San Francisco . . 757 Warehouse St., Los Angeles . . Branch Factory:
311 Minna Street, San Francisco . . Main Office and Factory: Waterbury, Conn.

BRISTOL'S

TRADE MARK REG. U. S. PAT. OFF.

PIONEERS IN PROCESS CONTROL SINCE 1889



U. S. PAPER PLANS EXPANSION

Business of the U. S. Paper Co., Los Angeles, has been showing so much promise that significant expansions are planned for the near future by Sam Abrams, president of the company.

Mr. Abrams expects to move from the present quarters at 1301 East 6th St. to a larger building the latter part of March. The new location has not yet been definitely selected, and it is possible that a new building will be erected for the firm.

At the time of moving, it is expected that the U. S. Paper Co. will add a more complete line of fine paper staples. At the present time they are handling second sheets, newsprint and K. V. P. bond, in addition to their lines of wrapping paper, bags, twine, etc.

In the latter group, the company has recently been appointed exclusive distributors for the jute twines and ropes of the Schlichter Jute & Cordage Co. of Philadelphia, and for the hard fibre twines of Mengden & Sons Co. of Houston, Texas. U. S. also represents exclusively the Wolf Bros. line of patent Handylock bags.

Another new addition is that of a line of fancy boxes made by the Morris Paper Mill of Chicago. These are fancy clothing and millinery boxes, sold to the higher class specialty shops.

The annual banquet of the company was held Dec. 30 at the Clark Hotel. At this gathering, the naming of S. F. Goldman, formerly sales manager of the company, to the post of vice president, was announced. Another feature of the banquet was the dispensing of more than \$2200 to the employees under the savings plan inaugurated early in 1934. By this plan the company deducts five per cent of the salaries of those earning less than \$200 per month, to which the firm adds another five per cent, the ten per cent total being distributed at the end of the year.

Sam Abrams, president, returned Dec. 15 from a five weeks trip through the East. While away he visited New York, Philadelphia, Baltimore, Kalamazoo, Green Bay, St. Louis, and other paper centers.

T. F. Donoghue, manager of the Chicago office of the Riegel Paper Corporation of New York, was a San Francisco visitor in November.

SPAULDING'S PULP SHIPMENTS TO JAPAN INCREASING

Since the Spaulding Pulp & Paper Company of Newberg, Oregon, began shipping unbleached sulphite pulp to Japan February 1st, 1933, the total tonnage up to January 1st, 1935, has reached 7,000 tons, causing the exporting of pulp to climb to eleventh place in Portland's exports.

During 1934 the Spaulding Pulp & Paper Company spent approximately \$245,000 for raw materials for producing its pulp. Of this total \$71,750 represented the cost of cordwood and logs, \$5,600 was spent for lime rock, \$29,750 for sulphur, \$14,700 for electric power, \$12,200 for oil and hog fuel, and \$45,500 for labor. About 90 men have been employed by the mill.

E. M. MILLS VISITS PLANTS

E. M. Mills, president of the Rainier Pulp & Paper Company, the Grays Harbor Pulp & Paper Company, the Olympic Forest Products Company, an executive vice-president of Crown-Zellerbach Corporation, visited the Northwest mills the middle of January.

SUMNER BUILDING EQUIPMENT

The Sumner Iron Works of Everett, Washington, is building a 110-inch chipper for the Olympic Forest Products Company, which will be installed about March 1st.

Two chip dusters are under construction for the Soundview Pulp Company of Everett.

The making of a 66-inch chipper for the Rainier Pulp & Paper Company at Shelton has just been completed.

A SAFETY TIP

Sure footing, important to all factories and plants where employees are passing to and fro in the course of their work, is always a highly important factor. The use of plain flat steel plates for truckways, door sills, loading dock toeboards is general in all practice. Scrap material that would otherwise be junked is often used. Becoming slightly worn, these plates often get a highly polished surface and become very slippery, especially when oily, greasy, wet or under winter or outdoor conditions. These can be roughened up very nicely with the use of the oxy-acetylene blowpipe flame.

Hold the flame on the steel plate in one spot until the spot just melts, then rapidly remove the flame. Do this in as many spots on the plates as necessary to give sufficient roughness. The small indentations with the rough hard edges of these artificial pit marks, constitute a long wearing roughness of just the right amount to prevent slipping—even when pushing a heavy loaded hand truck. The pit marks might well be spaced about one inch apart in both directions, either in straight rows or alternate rows.

Certain advantages of this method are as follows: a roughened non-slip surface can be created in a few minutes at short notice with small expense; a plate can be treated while in place—one reason for the low cost—or without removing it from service, even temporarily; the surface can be made with any degree of roughness to suit demands or conditions. This is an idea worth trying out.

ACCIDENT ON CONVEYOR

An employee was guiding wood up conveyor, inclined at an angle of approximately 45 degrees. One stick of wood rolled back and struck employee on back of right hand, bruising same. In order to prevent such an accident in the future, an appliance has been devised and constructed to keep wood which rolls back from hitting workers stationed at bottom of conveyors.

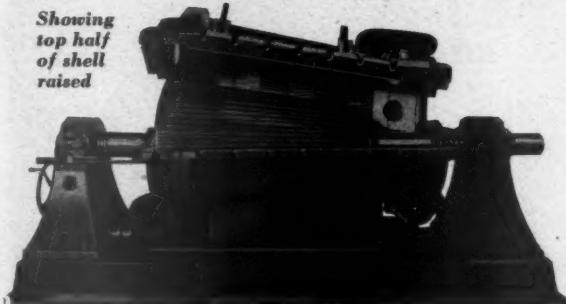
INFECTION IN FINGER

Employee was turning wheel to reverse carriage of saw. In so doing, he struck his right hand against a sharp piece of steel, cutting ring finger, dorsal side, second joint. Injured reported for first aid, but infection set in because he failed to report for further treatment.

Instructions have been issued that after the initial first aid treatment, employees should always report back to first aid room, no matter how small the scratch.

SAFETY SHOES

The Strathmore Paper Company has recently conducted a successful campaign to equip its mill employees with safety shoes. The idea was sold to the men on the basis that good safety shoes are more comfortable in addition to the protection which they afford. They also arranged for the sale of the shoes on the installment plan.



The JONES SPLIT ADJUSTABLE SHELL

JORDAN
ASSURES PEAK EFFICIENCY...
LOW OPERATING COSTS

If you are seeking maximum savings and minimum maintenance in Jordaning, you'll soon select the Jones split shell adjustable Jordan, because it offers more value.

For example, it assures duplication or continuation of desired Jordaning results by its precision adjustment and alignment of plug and shell.

Saves time and labor when refilling, cleaning or examining because of split, assembled type of shell and bandless plug (no extra charge for bandless filling).

The non-adjustable Bandless Plug increases life of fillings, as plug is mounted on stationary anti-friction bearings, eliminating all plug play and keeping plug in perfect alignment with shell.

Stationary anti-friction bearings allow plug to be easily interchanged and eliminate vibrations and weaving formerly caused by looseness between sliding bearings and their guides.

Saves space by eliminating the old, troublesome method of pulling the plug horizontally.

These modern features combine to give that operating efficiency which produces a more uniformly Jordaned stock, as well as important operating and maintenance economies needed to assure excellent returns on the investment. Bulletin on request.

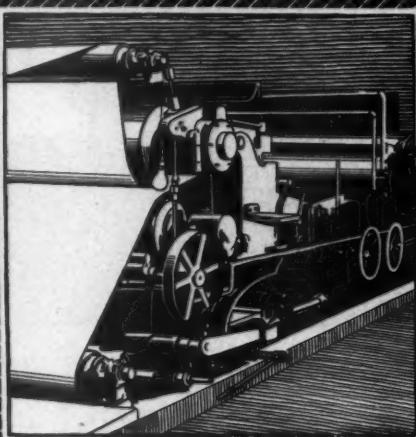
Pacific Coast Supply Co.

Seattle—Portland—San Francisco

Exclusive Pacific Coast Representative for the entire line of paper mill products made by

Jones

A name that has won a world-wide reputation through 75 years devoted to paper-making progress



In Choosing the Right Felts

The right felt for your press has the right warp and woof for your job—the right tensile strength—the right porosity—the right resiliency; high resistance to friction which means wearing quality.

The same rules apply to all your felts—top and bottom and others, regardless of the kind of paper you may make.

When you find such felts you have gone a long way towards maximum dehydration and minimum felting costs.

The Orr line is a quality line and a complete line. Consult an Orr representative and, between you, decide which Orr Felts will best meet your particular requirements; or write to

**ORR FELT and
BLANKET COMPANY**
PIQUA, OHIO

Pacific Coast Representative: GEO. S. MEDDIS
1650 No. Point St., San Francisco, Calif.

**ORR
FELTS**

LOADER TRUCK INJURES FOOT

An unloading gang was moving two-ton calender roll on a four-wheel dolly from box car into the mill. The dolly was being pushed along loading platform past a truck load of paper when, in some way, injured got between the two trucks and was thrown forward in such a manner as to get his foot caught underneath the wheel of the truck, causing a contusion, dislocation and fracture of the left foot. Safety shoes might have prevented this accident, but it is doubtful because of the excessive weight of the loaded truck.

WIRE BREAKS

In lifting a bale of waste paper into place on a flat car, injured caught hold of a wire. The wire broke, causing the employe to fall from the car to the ground, fracturing his arm.

In an attempt to prevent a recurrence of this accident, all employees have been instructed to use hooks in handling waste paper bales instead of wire.

TORN LIGAMENTS

Employe was bundling corrugated boxes when one of the bundles fell off the table. He jerked on the rope to prevent bundle from falling and caused his fourth finger on the right hand to become entangled in the rope. He sustained torn ligaments of finger. A notice giving the cause of this accident was placed on the bulletin board in an attempt to prevent a similar accident in the future.

A LESSON FROM A WINDER ACCIDENT

The operator had the winder running in the opposite direction than usual manner on a special order. He had done this before, but apparently forgot about it this time and placed left hand on roll of paper. He was drawn in between roll of paper and rider roll up to left shoulder, crushing and fracturing arm and fracturing skull. He was taken to hospital and died four hours later. To prevent another such accident, a higher guard will be placed on the machine, and air hoist is going to be put in to turn roll of paper around so that winder will not have to be run in opposite direction.

FARM WOODLOTS IMPORTANT

The importance of timber products sold from farm woodlots is strikingly shown by a U. S. forest service survey of 1930 United States census figures recently completed. For the year 1929 the value of farm timber products sold was \$242,042,245 which nearly equaled the value of the nation's tobacco crop for the same year and was more than 23% of the value of the national wheat crop. The value of farm timber products cut in Oregon in 1929 was \$3,908,087 and in Washington \$3,262,215. It is pointed out that in Oregon this represented nearly 4% of the total lumber return for the year 1929 and in Washington roughly 2%. In Oregon in 1929 there was 55,153 farms, including 16,548,000 acres, and in Washington 70,904 farms, with 13,533,000 acres. The average Oregon farm has 57 acres in woodlot and the average woodlot area for Washington farms is 26 acres.

The increasing possibilities of woodlot revenue for farmers, as the large virgin timber stands are exhausted, is indicated by returns from some of the eastern states. Timber products returns for Wisconsin farm woodlots were \$16,923,000 and for New York State \$16,259,000. The total farm woodland area of the United States is 149,945,000 acres with an average woodlot of 24 acres per farm.